



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 309TH MAINTENANCE WING (AFMC)
HILL AIR FORCE BASE, UTAH 84056

AFI21-101_AFMCSUP_309MXWGM21-04
16 March 2012

MEMORANDUM FOR 309 MXW

FROM: 309 MXW/CC

SUBJECT: 309th Maintenance Wing (309 MXW) Guidance Memorandum to
AFI 21-101, AFMC SUP 1, *Aircraft and Equipment Maintenance Management*

Reference: AFI 21-101, AFMC SUP 1

1. This Air Force Instruction (AFI) 21-101, Air Force Materiel Command Supplement (AFMC SUP) 1, 309 MXW Guidance Memorandum, immediately implements aircraft and equipment maintenance local management procedures to augment AFMC policy relating to aircraft and equipment maintenance procedures. Compliance with this guidance memorandum is mandatory. ACCESSIBILITY: Publications and forms are available for downloading or ordering on the e-publishing website at <http://www.e-publishing.af.mil/>. RELEASABILITY: There are no releasability restrictions on this publication. To the extent its directions are inconsistent with other Air Force (AF) publications, AF policy will be followed.
2. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual 33-363, *Management of Records*, and disposed of in accordance with the AF Records Disposition Schedule located at <https://www.my.af.mil/afrims/afrims/afrims/rims.cfm>. Refer recommended changes and questions about this publication to the office of primary responsibility using the AF Form 847, *Recommendations for Change of Publication*; route AF Forms 847 from the field through the chain of command of all groups affected by proposed changes.
3. This memorandum supports Air Force Policy Directive 21-1, *Air and Space Maintenance*, and AFI 21-101, AFMC Supplement 1, 14 December 2007. This document applies to all units assigned or on temporary duty, or transient units associated with 309 MXW personnel performing maintenance or producing products or services, working in and around aircraft, engines, major end items, components, and support/test equipment (including personnel traveling through these areas) as specifically stated to include contractors providing service in support of 309 MXW operations.
4. This memorandum acts as supplemental information to AFI 21-101, AFMC SUP 1 and consists of local requirements that are applicable to 309 MXW, to include the 309th Aircraft Maintenance and Regeneration Group.

5. Refer to Attachment for implementation of additional 309 MXW local guidance and instructions. Attachment paragraph numbering format mirrors paragraph numbering format listed in AFI 21-101, AFMC SUP 1. Additional local guidance inserted continues in the same format sequence.

6. The policy in this memorandum becomes void after 180 days have elapsed from the date of this memorandum, or upon incorporation in, change to, or a rewrite of AFI 21-101, AFMC SUP 1, whichever is earlier.

ALLAN E. DAY, Col, USAF
Commander

Attachment
Additional 309 MXW Local Guidance and Instructions

Attachment

Additional 309 MXW Local Guidance and Instructions

1.29.1. (Added) All waiver packages pertaining to 309 MXW policies shall be fully coordinated through the 309 Maintenance Wing Quality Assurance Office (309 MXW/QPQ).

1.35.1.4. (Added) In addition to the stipulation, personal cell phones or communication devices are authorized in industrial/production areas except, while performing hands-on maintenance activities, further restrictions apply depending on the operational areas personnel are working in.

NOTE: (Added) See Approved Cell Phone Policy Letter, 5 February 2009

1.35.1.4.1. (Added) Refer to AFI 91-207, *The US Air Force Traffic Safety Program*, Para 3.2.2. for restrictions on cell phone usage by operators of government vehicles on AF installations.

1.35.1.4.2. (Added) As specified in **Chapter 14** of this instruction; in areas designated Foreign Object Damage (FOD) critical, cell phones must be placed in personal lockers or personal tool drawers just as all other personal items are to be controlled.

1.35.1.4.3. (Added) Reference AFMAN 91-201, *Explosives Safety Standards* Para **9.30.4**, for restrictions of cell phone usage near explosive operations.

1.35.1.4.4. (Added) Reference Technical Order (TO) 1-1-3, *Inspection and Repair of Aircraft Integral Tanks and Fuel Cells*, and TO 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*, for restrictions on cell phone usage during or near fuel cell maintenance.

1.35.1.4.5. (Added) Refer to AFI 33-111, *Voice Systems Management*, paragraph 20.3. for restrictions on cell phone usage near classified information systems. Contact the base emission security manager for further guidance.

1.35.1.4.6. (Added) These prohibitions do not include common areas such as office areas, break or locker/ready rooms; however, personnel must ensure they do not operate cell phones when walking between restricted areas and common areas.

2.20. (Added) AFMC Form 299, *Safety, Bioenvironmental, Environmental and Fire Protection Review Process*.

2.20.1 (Added) Ensure Safety, Bioenvironmental Engineering, Environmental, and Fire Protection requirements and review recommendations are included by safety, fire protection, and bioenvironmental engineering staffs early in the conceptual stages of all contract or organic projects for:

2.20.1.1. (Added) Engineering/design projects of Air Force systems or system.

2.20.1.2. (Added) Industrial or support equipment purchases.

2.20.1.3. (Added) Industrial process changes, all modifications, repairs, additions

2.20.1.4. (Added) New facilities, to include credit card purchases for modification and equipment.

2.20.2. (Added) Use AFMC Form 299, or locally developed equivalent form, to document Safety, Bioenvironmental Engineering, Environmental Management, and Fire Protection review.

2.20.2.1. (Added) Ensure AFMC Form 299 is completed before sending it for Safety, Bioenvironmental Engineering, Environmental Management, and Fire Protection review.

2.20.2.2. (Added) It is the responsibility of the requesting project engineer to complete blocks 2 thru 15, *Design Agency Initiation and Evaluation* and block 16 *Preliminary Hazard List* of the AFMC Form 299.

2.20.2.3. (Added) After completion, an internal coordination and review will be completed in the group by the System Safety Program Officer , project engineer and engineering office (EN) supervisor with final review and coordination with the 309 MXW group safety offices or 309 MXW Safety Office as applicable.

2.20.2.4. (Added) Once internal coordination is completed; it is the responsibility of the project engineer to ensure the AFMC Form 299 is routed for center-level concurrent coordinating requirements review.

2.20.2.4.1. (Added) Center-level review will require coordination from the Ground Safety Office (OO-ALC/SEG), Bioenvironmental Engineering (75 MDG/SGB), Directorate of Environmental Management (75 CEG/CEV), and Fire Protection Engineering (75 CEG/CEFT).

2.20.2.5. (Added) The project engineer needs to change the design, as required, according to the comments from the Safety, Bioenvironmental Engineering, Environmental Management, and Fire Protection offices, and the designer needs to correct any deficiencies identified these offices. After final review is completed, the project engineer will file the AFMC Form 299 using requirements found in AFMAN 33-363 and AFI 33-364 *Records Disposition Procedures and Responsibilities*.

3.12.3.5.1. (Added) Ensure management support of the AS9100/9110, *Quality Management Systems – Aerospace –Requirements*, Aerospace Management System.

3.12.4.3.1. (Added) Ensure management support of the AS9100/9110, *Quality Management Systems – Aerospace –Requirements*, Aerospace Management System.

Section 8B (Added) All of section 8B supplemented by AFMC and 309 MXW; shown below constitutes the 309 MXW Quality Manual.

8.27.3. (Added) Responsibilities:

8.27.3.1. (Added) Quality Assurance (QA) Responsibilities. 309 MXW must provide the required resources to ensure effective quality assessments of products and services. A coordinated effort of all center and command activities and a close relationship with internal and external customers is required. In order for the overall QA system to work effectively, all 309 MXW personnel must take responsible actions that will contribute to safety, quality and productivity. The Ogden Air Logistics Center (OO-ALC) overall quality program places responsibility for product quality on the senior managers and conformance to requirements upon each employee. To that end, maintenance process discipline must be held to the highest standards.

8.27.3.2. (Added) 309 MXW production groups will draft their own Quality Assurance Plan (QAP) and Quality Assurance Surveillance Plan (QASP). The QAP will follow the format shown as attachment **A8.27.A1**. Production groups may submit requests for revisions to this document through coordination with the office of primary responsibility (OPR). Revisions may be made by the OPR without coordination among other groups when the request for revision is unique or specific to the requesting organization and does not cross group boundaries. The OPR of this manual will verify that changes do not conflict with this or higher level documents. In

such circumstances, before final approval is given, the OPR will provide unaffected groups with informational copies outlining the proposed revisions. Requests for revision affecting two or more groups will be processed through the OPR, and all necessary groups will be required to coordinate on the draft.

8.28.13. (Added) Group Quality Program (QP) Chiefs serve as the group QA focal point and reports directly to the 309 MXW/QP. The focal point is responsible for:

8.28.13.1. (Added) Developing and maintaining a QASP and a workload specific QAP.

8.28.13.2. (Added) Planning, executing, analyzing, and reporting group QA activities as described in this manual.

8.28.13.3. (Added) Working with the 309 MXW QA focal point on all QA issues and related taskings.

8.28.13.4. (Added) Reviewing QA data monthly and reporting to managers on internal and external quality status and issues.

8.28.13.5. (Added) Providing metrics.

8.28.13.6. (Added) Ensuring all internal, higher-level, and special contract workload quality requirements are incorporated into the appropriate Quality Plan, work control documents (WCD), or supporting instructions.

8.32.2.2. (Added) 309 MXW/QP in concert with the production QA offices will, as a minimum, develop the necessary supplemental requirements to the AFMC standard training matrix that all QA personnel who perform assessments must have. This matrix will be in section II of the Production Acceptance Certification/Training Scheduling System (PAC/TSS).

8.32.2.3. (Added) The chief of each quality office shall ensure all assigned personnel receive training to the extent necessary to perform quality assurance functions. This includes ancillary training and any specific training mandated for QA personnel by higher directives, such as egress and fuels technician training.

8.32.2.4. (Added) Training of QA personnel shall be IAW AFI 21-101_AFMC_SUP 1 and group specific subject area requirements outlined in each individual's training plan. QA training plans shall be established, documented and managed IAW policies, instructions and certification procedures and verified by the QA chief and/or quality supervisor.

8.32.2.5. (Added) QA personnel shall be trained and qualified by their respective QA office prior to conducting unaccompanied inspections or evaluations in their respective areas. QA personnel may be multi-skill trained IAW Impasse Panel Language into other functional areas to facilitate the execution of specific quality functions.

8.32.2.6. (Added) 309 MXW QA personnel are considered qualified after completing core 309 MXW training requirements, recurring training and other additional training, as identified by their respective office and described by this instruction.

8.34.5.1. (Added) Activity Inspection documentation in Quality Information Management Standard System (QIMSS) will include selecting the assessment type "Management Inspection" and annotating AFMC Form 343, *Quality Assurance Assessment*.

8.34.7. (Added) Oversight Inspections: (as a function of the Activity Inspection Program)

8.34.7.1. (Added) Wing Oversight Inspections (OSI). The 309 MXW Quality Compliance and Evaluation Office (309 MXW/QPQ) will manage and carry out structured OSIs. The concept and goal of OSIs is to engage 309 MXW home-office program managers, and other subject matter experts (SME), in assessing and monitoring the health and effectiveness of the wing's core maintenance management processes. Home-office program managers and SME will provide direct assistance, share best practices and educate the workforce in the implementation of maintenance programs. This practice should aid in stimulating a culture that continually views "cost, quality and schedule" as primary goals; thereby continually improving the effectiveness of our wing's Aerospace Management System.

8.34.7.2. (Added) OSIs will be scheduled on an annual cycle. The schedule will be documented and published by 309 MXW/QPQ. To ensure inspections are standardized and consistent, current and applicable HQ AFMC Logistics Standardization and Evaluation Team (LSET) checklists will be used as guides for the inspection teams. Systemic issues identified through data analysis, and observations made during previous inspections will also be assessed by the OSI teams to ensure sound corrective and preventive actions have been implemented. Results of OSIs will be used and submitted as part of the wing's Annual Technical Compliance Review report or equivalent document to HQ AFMC.

8.34.7.3. (Added) 309 MXW/QPQ Chief will assign a team lead for each scheduled OSI who will:

8.34.7.3.1. (Added) Develop and coordinate an OSI notification letter and preliminary inspection schedule to maintenance group leadership and designated maintenance group OSI point of contact (POCs).

8.34.7.3.2. (Added) Coordinate and finalize the specifics of each maintenance group's OSI schedule and POC/escort list with OSI POCs.

8.34.7.3.3. (Added) Provide any necessary related training to OSI augmentees.

8.34.7.3.4. (Added) Ensure that OSI in-briefs address any area specific safety and security issues and concerns, to include personal protective equipment and security clearance requirements.

8.34.7.3.5. (Added) Review the preliminary OSI schedule to:

8.34.7.3.5.1. (Added) Ensure all affected and applicable buildings and/or work locations are listed on the schedule.

8.34.7.3.5.2. (Added) Ensure work center-to-checklist applicability is verified by coordinating directly with affected management, supervision and quality, safety and security offices to determine OSI scope.

8.34.7.3.5.3. (Added) Coordinate and finalize the specifics of each maintenance group's OSI schedule and POC/escort list with 309 MXW/QPQ OSI team lead.

8.34.7.3.5.4. (Added) Ensure resolution of any schedule conflicts before the POC and/or escort roster is returned to the OSI team lead.

8.34.7.3.5.5. (Added) Coordinate any and all scheduling and POC and/or escort changes with the inspection team lead as soon as possible.

8.34.7.3.5.6. (Added) Coordinate and reserve, if necessary, locations and/or equipment for the in-brief.

8.34.7.3.5.7. (Added) Ensure maintenance group POCs and/or escort personnel attend inspection in-briefs.

8.34.7.4. (Added) Maintenance groups will designate a non-bargaining unit employee as OSI POC who will:

8.34.7.4.1. (Added) Act as the liaison/focal point for all maintenance groups and 309 MXW/QPQ inspection issues.

8.34.7.4.2. (Added) Provide 309 MXW/QPQ OSI Team Lead with the current organizational structure.

8.34.7.5. (Added) Results of OSIs will be documented in a formal report and presented to wing and group leadership. Group leadership should consider and may use the results of OSIs to make sound business decisions. Findings, or an aggregate of findings, in a particular area of policy which are significant enough to require home office assistance and/or oversight, will be classified as Not in Compliance Areas (NICA). NICAs will be tracked and monitored in the 309 MXW Corrective/Preventive Action Request (C/PAR) Program to ensure sound corrective and preventive actions have been implemented to prevent future reoccurrence.

8.34.7.6. (Added) During a QA assessment, the assessed organization may dispute documented nonconformance findings. In cases where the nonconformance is considered to be in error and the issuing office is outside of the assessed group, coordination will be staffed through the group QA office to the issuing office. The assessed organization shall provide objective evidence to substantiate their position on the nonconformance finding. If an agreement cannot be reached between the assessed and issuing organizations on the status of the nonconformance, one or both parties shall elevate the issue to the 309 MXW/QP for resolution. If the dispute is within the group, the issue shall be raised to the appropriate management level up to the group commander/director for resolution.

8.34.7.7. (Added) OSI data will be used to satisfy the requirements to show evidence of compliance with applicable HQ AFMC checklists and activity inspections.

8.35.2.1. (Added) Follow-up assessments will be performed at the direction of the 309 MXW Commander (CC) or 309th Aircraft Maintenance Group Commander (AMXG/CC) following the receipt of a Maintenance Standard Evaluation Program (MSEP) rating of “Unsatisfactory” or “Marginal”. A follow-up may also be performed at the discretion of 309 MXW/CC, 309 AMXG/CC or the 309 MXW Quality Assurance Office. Procedures will be outlined in the Group QAP.

8.35.4.9. (Added) Group quality offices must develop rating criteria for assessments performed on specific products or services as a part of their QASP. For example, each product or service group will determine the Acceptable Quality Level (AQL) for the number of minor findings allowed in order to escalate a Quality Assessment Rating (QAR)-1 to a QAR-3 and to a major finding. The AQL will be group specific based on the product or process being evaluated and may be revised as necessary to support an effective QASP. The QASP will explain the methodology rationale used to establish the AQL (e.g., American National Standards Institute [ANSI]/Aerospace Standard Quality [ASQ] Z1.4 - 2008, *Sampling Procedures and Tables for Inspection by Attributes*) and any related analysis process or formulas, as applicable. AQLs must

be established for type of work, series or like end items, i.e., aircraft, fuels, egress, commodities, avionics, generators, large landing gear, etc. and will be approved by group CC.

8.35.4.9.1. (Added) AQLs for activity inspections will be percentage based. AQLs will be calculated using number of findings divided by total number of items inspected. This is required to properly establish QAR 1 and 3 ratings for these sample size inspections.

8.35.4.9.2. (Added) When assessments consistently receive QAR-1 ratings, the group may adjust the AQL to allow for fewer minor findings or reduce the number of assessments performed in that area.

8.35.5.5.7.1. (Added) AFMC Form 79 *Customer Feedback*. Customer feedback and focus are enhanced through various customer interface meetings, site visits, daily contact, the Deficiency Reporting System and AFMC Form 79. Customer feedback applies to all internal and external customers; these cards may be shipped with all commodities produced by 309 MXW groups internal or external. Returned forms are reviewed, analyzed and appropriate corrective and preventative actions are taken by the responsible personnel. Group QPs will coordinate and report returned AFMC Form 79 results. The QAS or QIMSS administrator will enter this information into the QIMSS for tracking and metrics. The 309 AMXG has a separate Customer Service section and handles all customer defects through the Joint Deficiency Reporting System (JDRS).

8.35.5.6.3. (Added) All production groups in 309 MXW will establish a Quality Assurance Plan and a Quality Assurance Surveillance Plan. The QAP will follow the format shown as attachment **A8.27.A1**. The purpose of the QASP is to set forth performance measures, inspection frequency standards, surveillance schedules and inspection methods used to determine compliance with requirements found in established instructions and technical orders. The QASP development establishes how resources will be used to focus on group problem areas or weakness and other applicable requirements. Development and implementation of the QASP allows individual groups to clearly define the scope of inspection program within the organization. Group commanders/directors in concert with their quality chief will set the minimum number of surveillances and evaluations that must be accomplished and reported on a monthly or quarterly basis.

8.35.5.6.3.1. (Added) Each group QA office will publish a quarterly QASP. The approval authority for this QASP is delegated to the group director (CD), commander (CC), and civilian leader (CL).

8.35.5.6.3.2. (Added) Amount of detail in the QASP regarding a particular inspection should be consistent with the importance of the task. The QASP should focus on the type, quantity and frequency of assessments to be completed and the methodology used to determine quantity and frequency, and not on the steps required or procedures used to provide the product or service.

8.35.5.6.3.3. (Added) Historical assessment data, customer satisfaction and management direction shall be used to update and revise individual QASPs. Groups will conduct a review every 3 months, as a minimum, to update the QASP.

8.35.5.6.3.4. (Added) Changing or new workload requirements will drive revisions to the QASP. Groups will identify new workload requirements in the QASP and develop assessment criteria as described in paragraph **6.0.** to meet the requirements of a changing workload environment.

8.35.5.6.3.5. (Added) Each group QASP will be maintained in the applicable group quality assurance office.

8.35.6.2.1. (Added) 309 MXW/QPQ will plan and direct any additional pre-MSEP/Unit Compliance Inspection or management-directed inspections (MI) as required by and for the wing.

8.35.6.2.2. (Added) 309 MXW MSEP evaluations and pre-inspections will be graded according to para **8.35.1.4.3** of AFI 21-101_AFMC SUP1.

8.35.6.3. (Added) The evaluator will inform the immediate supervisor prior to conducting the Personal Evaluation (PE). The immediate supervisor will inform the evaluator of safety concerns in the area to be inspected prior to the start of the evaluation. The evaluator will review the technician's PAC records as part of the PE. Prior to conducting the PE, the supervisor informs the individual of the evaluation. The evaluator then briefs the individual on the evaluation and the rating criteria, the exact steps where the task will start and end, and that the PE will be rated pass or fail. The evaluator will brief the individual(s) at the completion of the PE and present the rating to the individual(s) and the immediate supervisor.

8.35.7. (Added) Employees will be pre-selected for PEs based on a 24-month cycle IAW AFI 21-101_AFMC_SUP1. An 309 MXW employee found to be responsible for a Quality Deficiency Report (QDR) due to workmanship, a failed Quality Verification Inspection (QVI) or has failed a PE, will be decertified in his/her Production Acceptance Certification Standard System (PACSS) folder within 1 working day. The employee will not be allowed to stamp off any work or exhibit related to the QDR workmanship failure or the PE failure. The employee will not be recertified until the supervisor has verified the employee has regained the skills required to do the work error free. The employee shall receive specific training relating to the cause of the quality workmanship failure of PE failure. Training may be On the Job Training (OJT), class room (formal or informal), or a review of technical procedures. Whichever is used is up to the supervisor as they deem necessary to bring the employee's work up to quality standards.

8.35.8.2.1. (Added) QVIs will be accomplished in each workload assessment area per AFI 21-101 and the group QASP. The evaluator verifies the process is being accomplished IAW up-to-date standards, codes, technical orders, drawings and work control documents. Findings observed during the QVI, but not directly attributable to the overall QVI assessment (such as PACSS records, tool boxes, etc.), will be documented as individual findings in the appropriate assessment category.

8.35.8.2.2. (Added) Rating of QVIs will be done IAW AFI 21-101_AFMC SUP 1, Para **8.35.8.1.**

8.35.8.2.3. (Added) Do not list observations observed as part of a planned inspection as Technical Data Violation (TDV)s, Detected Safety Violation (DSV)s, or Unsatisfactory Condition Reports .

8.35.9. (Added) Special Inspections may be driven by data analysis, at the discretion of management or supervision, and can be used to investigate organically-caused defects identified by production organizations on AFMC Forms 202, *Nonconforming Technical Assistance Request and Reply*.

8.35.10.1. (Added) Any level of management may request MIs. Group management may request MIs within their group or from the wing. Such MIs requested will be coordinated through the wing quality office, (309 MXW/QP). The results of MIs shall be reported to the individual requester. MIs can be non-rated and may be counted in QA trends. If non-rated, the Quality Assessment Rating will be “Non-Rated (NR)”.

8.35.10.1.1. (Added) Process Reviews:

8.35.10.1.1.1. (Added) A process review is a thorough review of a production process to ensure it is operating within process specifications, using conforming materials, and performed by qualified and certified personnel IAW all technical, safety, and other applicable directives. Technical data, WCDs, Air Force Occupational Safety and Health (AFOSH) standards, applicable LSET checklists, and any other pertinent directive or requirement to the process being reviewed will be used. Findings from a process review will be documented in the 309 MXW C/PAR system.

8.35.11.1. (Added) DSVs are unplanned and not subject to the planning and scheduling requirements of the group QASP; however, DSVs may be used for purposes of analysis and the development of trend data.

8.35.11.2. (Added) TDV: An observation of any person performing maintenance without the proper technical data available and in use when specifically required by the WCD.

8.41.3. (Added) 309 MXW Quality Review Board (QRB) meets quarterly and is chaired by the wing commander or deputy and co-chaired by 309 MXW/QP. The QRB is made up of the 309 MXW group commanders or directors and their deputies and the 309 MXW/QP chief. Union representation is also invited. QA metric data from Core or Routine Inspection List (RIL) Inspections will be reported quarterly in the QRB. Other assessment data will be reviewed by the QRB throughout the year. The QRB consists of metrics provided IAW the Depot Maintenance Metrics manual, oversight inspection reports, safety/environmental metrics, deficiency report metrics and applicable special interest items. 309 MXW Core/RIL QA metrics are reported quarterly to the Ogden Air Logistics Center Commander (OO-ALC/CC) and Headquarters Air Force Material Command Quality Office (HQ AFMC/A4Q) by 309 MXW/QP. Union representation will be requested through the Labor Relations Liaison.

8.41.4. (Added) Product group quality offices will:

8.41.4.1. (Added) Query the QIMSS database and provide group QRB data for the Core/RIL metrics to 309 MXW/QPQ by the 10th working day of the month following the completion of the quarter.

8.41.4.2. (Added) Provide peel back slides or backup QRB data by the date requested from 309 MXW/QPQ.

8.41.4.3. (Added) Brief the applicable product group and/or squadron management monthly, including Depot Maintenance QA metrics, special inspection results and other issues as required by group management.

8.41.4.4. (Added) The 309th Maintenance Wing Environmental and Safety Office (309 MXW/QPE) will consolidate safety inspection data and provide charts and analysis as necessary for the 309 MWC/CC monthly. This data will be included with the QA metrics and reported quarterly to OO-ALC/CC and AFMC/A4Q.

8.41.4.5. (Added) The 309 MXW/QP will be the OPR for managing the QRB. They will work with each group POC to establish deadlines to conduct analysis; grade/rate inspections, provide compliance ratings in each major assessment category and determine overall compliance ratings for each program evaluated at group level. The wing will average all group-level inspections to determine a compliance rating for each program inspected. The average of all inspections passed versus conducted is the Program Compliance rate. After which the groups and the wing must deduct for TDVs and DSVs to get the group and the wing's overall compliance rate.

8.41.5. (Added) 309 MXW/QP will:

8.41.5.1. (Added) Consolidate data from product group quality offices into a wing rollup.

8.41.5.2. (Added) Create and maintain charts for all Core/RIL inspection categories and a wing summary chart.

8.41.5.3. (Added) Analyze overall metric position. Additional queries of the QIMSS database will be done as necessary to determine if further attention is required on any particular metric.

8.41.5.4. (Added) Report wing metrics to the commander, the center and AFMC/A4Q as required in the applicable forum.

8.41.5.5. (Added) Data generated from the submittal of these forms shall be entered and maintained in the QIMSS. Instructions for completing AFMC Form 343 are contained in Attachment 24. Any AFMC Forms 343 determined to be inaccurate/invalid will be corrected or made inactive in QIMSS.

8.42.1.1. (Added) 309 MXW will ensure all Deficiency Reports (DR) are processed IAW with TO 00-35D-54-WA-1, *USAF Deficiency Reporting, Investigating and Resolution*, OPNAVINST 4790.2H, *The Naval Aviation Maintenance Program*, AFMAN 23-110, *USAF Supply Manual*, AFMCI 21-130, *Depot Maintenance Material Control*, AFMCI 63-510, *Deficiency Reporting (DR) and Investigation Program*, and other applicable directives.

8.42.2. (Added) Production groups will follow established procedures as specified within their QAP for processing of DRs as each group has unique circumstances due to the variety of products involved.

NOTE: (Added) As of 1 Jun 08, the Deficiency Reporting, Investigating & Resolution process migrated from the current system of record, the Deficiency Reporting and Investigating System/Information Central system and began capturing deficiencies in the JDRS. JDRS is a joint service adaptation of the existing Naval Air Systems Command (NAVAIR), Naval Aviation Maintenance Discrepancy Reporting Program or system.

8.43.1 (Added) The AFMC Form 77, *Request for Quality Assistance (RQA)*, is a tool that an employee or organization may use to request quality assistance. It may be signed by the employee, submitted anonymously by the employee through their immediate supervisor, or submitted directly to QPQ. The completed form should be legible and sufficiently define the situation that requires assistance.

8.43.2. (Added) RQAs can be requested by anyone in the maintenance process; however, normally it would be a management official.

8.43.2.1. (Added) RQAs are requested through the generation of an AFMC Form 77 either hard copy or electronically generated in QIMSS. Although QIMSS is the preferred method, either mode is acceptable.

8.43.2.2. (Added) Requests for quality assistance will not be performed on subjects covered by the Master Labor Agreement.

8.43.2.3. (Added) The responsibility for conducting RQAs is assigned to a group's Quality Office.

8.43.2.4. (Added) When a RQA is received, the group's lead QAS will assign the RQA to a QAS who will log it into the group's QIMSS database for processing and investigation. Although not required, the individual submitting the RQA is encouraged to provide their name, office routing symbol and duty phone number to allow the Quality Assurance Specialists to obtain additional information if needed.

8.43.2.5. (Added) The investigation of the RQA will be accomplished in a timely and thorough manner. Timely is defined as 1 to 8 weeks from receipt of the RQA to completion. Within that time frame the requesting person/organization will receive weekly updates by the QAS assigned to the RQA. The investigation will continue until a corrective action plan has been initiated or a determination is made that a problem does not exist.

8.43.2.5.1. (Added) Requester will:

8.43.2.5.1.1. (Added) Obtain a blank AFMC Form 77 either hard copy or through QIMSS. The form is available from AFMC e-pubs/forms web site, or in QIMSS.

8.43.2.5.1.2. (Added) Complete the top half of the RQA form.

8.43.2.5.1.3. (Added) Forward the RQA form to the squadron-level management official for coordination and approval.

8.43.2.5.2. (Added) Squadron-level management will:

8.43.2.5.2.1. (Added) Receive AFMC Form 77 from the requester and review for approval. Determine if the subject matter meets the general requirements identified in paragraph 2 of this publication. If it is determined the RQA does not meet the guidelines of paragraph 2, squadron management will contact the requester and provide rationale for disapproval.

8.43.2.5.2.2. (Added) Coordinate approval of RQA by co-signing with the requester at the center of the AFMC Form 77 in the "SIGNATURE" block.

8.43.2.5.2.3. (Added) Forward coordinated AFMC Form 77 to the Quality Assurance Office.

8.43.2.5.3. (Added) The assigned inspector will serve as the team leader for each RQA performed. Depending upon the RQA subject and scope, it may be accomplished by one or more employees:

8.43.2.5.3.1. (Added) Meet with the requester and discuss the RQA subject in detail to ensure the investigator knows the total scope of the requester's needs.

8.43.2.5.3.2. (Added) Perform an investigation and record the status electronically in QIMSS and print out the completed AFMC Form 77 to be presented to the requester.

8.43.2.5.3.3. (Added) Notify those responsible at the time of detection of any safety or critical conditions observed for their immediate corrective action.

8.43.2.5.3.4. (Added) Analyze investigation results and prepare the RQA report by completing the bottom half of the RQA form electronically in QIMSS.

8.43.2.5.3.5. (Added) Discuss the completed RQA results with the employee who performed the investigation.

8.43.2.5.3.6. (Added) Meet with the QP supervisor to discuss RQA results and coordinate satisfaction and completion of the RQA report. The supervisor will co-sign with the investigator at the bottom of the printed out copy of the completed AFMC Form 77 in the "SIGNATURE" block.

8.43.2.5.3.7. (Added) When applicable, coordinate for approval with 309 MXW/QP management on completed RQA reports that were requested outside 309 MXW/QP. Coordination will be prior to the RQA team leader making an appointment with the person who requested the RQA and out-briefing results to the requester.

8.43.2.5.3.8. (Added) Make an appointment with the person who requested the RQA, out-brief the results, and give the original completed AFMC Form 77 and the RQA report to the requester. However, if the requester is outside the wing, the QP supervisor will coordinate for approval through management.

8.43.2.5.3.9. (Added) Close out the AFMC Form 77 by selecting closed in the "STATUS" block. Insert the close date in the "STATUS DATE" block.

8.43.2.5.3.10. (Added) File and maintain RQA records IAW the Air Force Records Information Management System (AFRIMS), Table 21-09 *Quality Control Inspection/Evaluation Records*; Rule 02.00. The records are the hard copy project folder that contains the project record, a copy of the original AFMC Form 77, and the RQA report. The folder may also contain back-up data and other findings. The folder and its contents will be retained for 1 year.

8.44. (Added) Quality Assurance personnel will gather and input AFMC Form 343, data into QIMSS and notify responsible production management of assessment results. Quality Assurance personnel are also responsible to review corrective/preventive action and accept or reject the action. Quality Assurance personnel are also responsible to perform follow-up assessments IAW their group Quality Plan. AFI 21-101 driven inspections will be recorded on AFMC Form 343 and documented in QIMSS. Applicable LSET checklists, group checklists and other documents, as appropriate, shall be used as references during the performance of the assessment.

8.44.1. (Added) Data generated from the submittal of these forms shall be entered and maintained in the QIMSS. Instructions for completing AFMC Form 343 are contained in **Attachment 24**. Any AFMC Form 343s determined to be inaccurate/invalid will be corrected or made inactive in QIMSS.

8.44.1.1. (Added) QIMSS provides authorized personnel direct access for inputting, editing, viewing and retrieving of data. QIMSS can be accessed via the intranet Citrix server or by having terminal services software installed. The Uniform Resource Locator for intranet access is "apcitrix". In the event of a system outage, AFMC Form 343 will be hand scribed and routed manually. When the system is again operational, the information will be entered and the assessment date automatically filled in by the system will be manually changed to the actual assessment date.

8.44.1.2. (Added) Quality Assurance personnel will gather and input AFMC Form 343 data into QIMSS and notify responsible production management of assessment results. Quality Assurance personnel are also responsible to review corrective/preventive actions, accept or reject the proposed action as well as perform follow-up assessments IAW their group Quality Plan.

8.44.3. (Added) Corrective/Preventive Actions:

8.44.3.1. (Added) The corrective/preventive action process involves elimination of nonconformities, development and implementation of preventive action plans, root cause analysis, analysis of effectiveness of the preventive action and continuous improvement. The focus of preventive action in the 309 MXW is to prevent the recurrence of nonconformities.

8.44.3.2. (Added) Corrective actions (CA) on the AFMC Form 343 shall describe the corrective action taken to address the nonconformity, name of individual completing the corrective action, date the corrective action was implemented and other information as necessary. Acceptance or rejection of the CA will be made by the issuing organization with the following exception; the 309 AMXG CA will be accepted/rejected by the applicable 309 AMXG squadron designated point of contact.

8.44.3.3. (Added) Preventive action to prevent recurrence on the AFMC Form 343 will include actions taken to eliminate the causes of an existing nonconformity, defect or other undesirable situation in order to prevent recurrence. 309 AMXG PA will be accepted/rejected by the applicable 309 AMXG squadron designated POC.

8.44.3.4. (Added) The manager responsible for the process involved will input corrective and preventive actions into QIMSS and notify the appropriate QA personnel for review.

8.44.3.5. (Added) CA/PA is due 10 working days after the date of assessment. When a QAR-3 finding is discovered, QA personnel will notify the individual(s) involved and production management immediately.

8.44.3.6. (Added) AFMC Form 343 Suspense Extensions. In the event the responsible person is unable to complete corrective and preventive action, or the review process will exceed the 10-day suspense, an extension may be requested. The responsible person will contact the appropriate quality office management to request the extension. The request for extension will include the reason for the delay and the expected completion date, not to exceed 30 days from the original suspense date. Quality Assurance management will review the request and may grant an extension up to 30 days and update QIMSS to reflect the new suspense date. Any request for an extension beyond the initial 30 days will be coordinated between the second level or higher supervisor and the product quality office chief.

8.44.3.7. (Added) CA/PA reviews will be accomplished by QA personnel. The submitting organization shall be notified when CA/PA reviews are not approved and be given an additional 10 working days to respond. All QA offices will monitor QIMSS to ensure CAs/PAs are submitted by the suspense date.

8.44.3.8. (Added) Cross-group AFMC Form 343. When a finding is noted against another group, an AFMC Form 343 will be initiated IAW the process outlined in the Cross Group 343 checklist, **Attachment 24**.

8.44.3.9. (Added) Cross-group AFMC Form 343s are closed IAW the process listed in **Attachment 25**.

9.8.1. (Added) 309 MXW/QPQ will be the OPR for the Impoundment Program.

9.9.6.1. (Added) 309 AMARG will use placards on flight line.

9.9.7. (Added) F-22 terms – Integrated Maintenance Information System (IMIS)

9.9.8. (Added) F-22 terms – Portable Maintenance Aid

9.9.9. (Added) Integrated Missile Database (IMDB). System used to track inventory of missile motors. Specifically, within IMDB, Missile Motor Tracking and Reporting System (MMTRS) will be referenced and documented based on guidance within this instruction.

NOTE: (Added) Impoundment is mandatory for each occurrence of paragraphs **9.10.1.** thru **9.10.9.1.**

9.10.1.1. (Added) Total loss of hydraulic pressure.

9.10.1.2. (Added) Lightning strikes.

9.10.1.3. (Added) Nose Landing Gear/Main Landing Gear tire blowout during taxi or take-off F-16 will download group specific checklist.

9.10.1.4. (Added) Emergency power unit uncommanded activation (F-16 only).

9.10.1.5. (Added) Known or suspected damage caused by natural environment or wildlife (i.e., bird strike, hail, etc.).

9.10.1.6. (Added) Major fuel system problems (i.e., uncorrectable fuel imbalance) refer to the applicable aircraft –1 TO for limitations.

9.10.1.7. (Added) Main Fuel Shut-off Valve failure (F-16 only).

9.10.1.8. (Added) Contaminated fluids (in aircraft, engine, equipment, test systems, plating tanks, etc.). Fluids are considered contaminated when they possess foreign particles, material, or are contaminated from an outside source (examples: metal, dirt, water, etc.). Hydraulic fluid is not considered contaminated when it is crossed from another system on an aircraft.

9.10.3.1. (Added) Any unintended departure from controlled flight for any reason.

9.10.3.2. (Added) Any malfunction resulting in an unexpected, hazardous change of flight attitude, altitude, or heading.

9.10.3.3. (Added) Failure to rotate on take-off roll.

9.10.4.1. (Added) An inadvertent activation of onboard systems, fire suppression, egress, stores cartridges etc.

9.10.5.7. (Added) Engine failures, including flameout, compressor stalls (not augmentor stalls), stagnation, vibrations, loss of thrust, and auto acceleration.

9.10.5.7.1. (Added) AMARG - When single engine aircraft declares an in-flight emergency for engine problems.

9.10.8.1. (Added) Any aircraft/equipment accident, structural damage, fire, or vandalism.

9.10.9.1. (Added) Loss of cabin pressure, loss of consciousness, hypoxia, or smoke/fumes in cockpit.

NOTE: (Added) Aircraft, equipment or Major End Items meeting impoundment criteria listed below will be placed into a “maintenance freeze” status. All maintenance activity will cease except to “safe” the aircraft or equipment for maintenance. No other actions will be taken until an impoundment authority determines if the aircraft or equipment requires impoundment.

9.10.10.1.1. (Added) When a tool or other item is determined to be missing on aircraft in the incoming or flight test status, all applicable weapon systems will be impounded. F-22 aircraft will be considered in prep-for-flight status (Flight Test) when any defined prep-for-flight event occurs (when applicable to aircraft). The following are defined prep-for-flight events: Fuel operations, engine installation, seat & canopy installation and final (top coat) coating application.

9.10.10.1.2. (Added) 309 AMARG have aircraft stored in the desert and do not require impoundment for lost tools. For example: Aircraft slated for the Defense Reutilization and Marketing Office (DRMO), Aircraft stored in the 4000 storage area, (non-operational and non-flyable aircraft). Aircraft stored in the 1000, 2000 and 3000 storage areas will report items lost on aircraft. For aircraft in the 3000 storage area, flyable hold and lost tool reporting is critical.

9.10.10.3.1. (Added) Known or suspected FOD to an aircraft, missile, drone, support equipment, engine, or component.

NOTE: (Added) Any condition that exceeds TO or NAVAIR limitations is considered FOD. Nicks, dents, gouges, etc, that DO NOT exceed TO or NAVAIR limits do not meet the requirements for impound.

9.10.10.4. (Added) Any hazardous condition exists that threatens property or the safety of personnel.

9.10.10.5. (Added) Any abnormal situation that causes the asset or equipment to be removed from the normal maintenance or production flow.

9.10.10.6. (Added) When deemed necessary by an impoundment authority.

NOTE: (Added) Personnel or supervision in direct control of impounded aircraft or equipment will not serve as impoundment officials.

9.11.1. (Added) Any production superintendent, first-level supervisor or higher assigned to 309 AMXG has impoundment authority to include section chiefs holding the rank of MSgt or higher. In addition, Flight Safety (OO-ALC/SEF) or alternates have impoundment authority. All squadron directors and safety officers in the 309 AMXG have impoundment authority for support equipment.

9.11.1.1 (Added) 309 AMARG Commander will designate in writing, personnel assigned as impoundment authorities. Personnel will have the authority to impound weapons systems and equipment. Squadron directors will appoint in writing personnel as impoundment officials.

9.11.2. (Added) The 514th Flight Test Squadron (514 FLTS) Commander or designated representative may recommend impoundment to any of the above listed authorities.

9.11.3. (Added) For impoundment transfer (engines), impoundment authority will be C-130 Engine Shop or F-16/A-10/F-22 Engine Shop supervisor.

9.11.4. (Added) If the reason for impoundment is determined to be reportable IAW AFI 91-204, *Safety Investigations and Reports*, (this includes support equipment damage exceeding \$2,000), the appropriate Safety Office will appoint the investigation official.

9.11.5. (Added) All 309 MXW employees are empowered and obligated to recommend to the impoundment authority the impoundment of an aircraft, components, or support equipment when they are aware of an impounding condition.

9.11.6. (Added) If the reason for impoundment is due to defective equipment, coordinate with Quality Assurance and the applicable intermediate maintenance section prior to determining disposition for possible TO.00-35D-54-WA-1, requirements for removed parts.

9.11.7. (Added) Impoundment authority and impoundment official may appoint a dedicated team to work impoundment aircraft and support equipment problems if deemed necessary.

9.12.1. (Added) Add Air Force Technical Order (AFTO) Form 95, *Significant Historical Data*, WCD, and AF Form 2519 V-5, *Equipment Impoundment Worksheet*.

9.12.1.1. (Added) For Aircraft in Flight test phase:

9.12.1.1.1. (Added) Initiate AFTO Form 781A, *Maintenance Discrepancy and Work Document* and complete as follows:

9.12.1.1.2. (Added) (Item 1): "AIRCRAFT IMPOUNDED FOR INVESTIGATION OF:" (state problem), "SEE PAGE ___ ITEM ___ FOR ORIGINAL DISCREPANCY." Enter "IMPOUNDMENT OFFICIAL: _____," and a RED X in the symbol block. Use of preprinted AFTO Form 781A is authorized. Preprinted Forms 781 are not authorized for F-22s.

9.12.1.1.3. (Added) For the F-22, add an aircraft Impoundment Warning in IMIS forms section in the PMA on all three Work Center Event entries under the primary Job Control Number or WCD IAW paragraph **9.12.1.1.2**.

9.12.1.1.4. (Added) Enter in AFTO Form 781A (Item 2): "ALL MAINTENANCE DEFERRED UNTIL AIRCRAFT RELEASED FOR MAINTENANCE BY IMPOUNDMENT OFFICIAL." Enter a RED X in the symbol block. (For F-22, annotation will be made in the IMIS forms section of the PMA).

9.12.1.1.5. (Added) Enter in AFTO Form 781A (Item 3): "FORMS AND CORRECTIVE ACTION TO BE REVIEWED BY IMPOUNDMENT OFFICIAL PRIOR TO RELEASE FROM IMPOUNDMENT." Enter a RED DASH in the symbol block. (For F-22, annotation will be made in the IMIS forms section of the PMA).

9.12.1.1.6. (Added) Draw a RED BORDER on all four sides of the impoundment AFTO 781A. N/A to the F-22. (No Red Border is available in IMIS Forms Section).

9.12.1.1.7. (Added) For lost items, follow the procedures in the lost tool search package (on aircraft or off aircraft) for aircraft in production. If the aircraft is in Flight Test, ensure a Red "X" is placed on the AFTO Form 781A, a lost tool package is initiated, and the procedures of this supplement are followed. Contact tool control manager in the Customer Support Section (QPQS) at 586-4272, or after normal duty hours and on weekends, get the Lost Tool/Foreign Object Package from 309 MXW Wing Operations Center, 777-3238, Building 849 (Reference Chapter 10B of this instruction.). (For F-22, annotation will be made in the IMIS forms section of the PMA).

9.12.1.2. (Added) For missiles:

9.12.1.2.1. (Added) 309th Maintenance Operations Center personnel, in coordination with QA, the engineering authority, and/or the applicable production supervisor will complete an AFTO

Form 95. The AFTO Form 95 will be inserted into a protective document that allows visibility on both front and back sides and attached to the equipment in question. The AFTO Form 95 will be completed as follows:

9.12.1.2.1.1. (Added) Form: May be completely Red or have a Red border around entire form (use a **BOLD/WIDE** red marker to make the border).

9.12.1.2.1.2. (Added) Block 1: Mission Design Series, type model and series. (Minuteman: LGM30G).

9.12.1.2.1.3. (Added) Block 3: Enter the equipment serial number.

9.12.1.2.1.4. (Added) Block 4: Enter date.

9.12.1.2.1.5. (Added) Block A: Insert a Red “X”.

9.12.1.2.1.6. (Added) Block B: Enter “**IMPOUNDED**” using **BOLD/WIDE** letters. Then add a clear and concise statement indicating the reason for impoundment, the name of the impoundment authority with phone number, and name of the assigned impoundment official and phone number.

9.12.1.2.1.6.1. (Added) Document any special procedures, limitations, and/or restrictions associated with handling, transportation, or storage.

9.12.1.2.1.6.2. (Added) Part number for any part removed.

9.12.1.2.1.6.3. (Added) Serial number for any part removed.

9.12.1.2.1.7. (Added) Block C: Work center where asset is located.

NOTE: (Added) Should a missile motor or booster be impounded, the description on the reverse side of the AFTO Form 95 will be the exact verbiage as entered into the IMDB (tab: MMTRS) under the “Remarks” section. This exact verbiage will also be used in paragraph **9.12.1.2.1.8.** email traffic.

9.12.1.2.1.8. (Added) The MOC will provide an email to 309 MMXG/MXNNS IMDB (MMTRS) POCs for entry into IMDB, as applicable. Descriptive comments shall be placed in the “Remarks” section pertaining to the missile motor or booster in question.

9.12.1.3. (Added) For Engines/ Equipment:

NOTE: (Added) If F-16/A-10/F-22 or C-130 engines are called to perform inspections on installed engines on impounded aircraft, the technicians will perform tasks IAW the applicable TO and sign off all applicable AFTO 781 discrepancies under the aircraft impoundment. If the engine is removed, engine shop procedures outlined in Section **9.12.1.3** of this chapter will be followed. (For F-22, this will be accomplished in the IMIS forms section of the PMA).

9.12.1.3.1. (Added) When impounding, enter on AFTO Form 244, *Industrial Support/Equipment Record*, the reason for impoundment, outlined in red, and enter a Red X in the symbol block.

9.12.1.3.2. (Added) For engines and equipment without an AFTO Form 244 initiate AF Form 2519 V-5.

9.12.1.3.3. (Added) Releasing authority will review forms and corrective action and clear the Red X on AFTO Form 244 or sign AF Form 2519 V-5.

9.12.2. (Added) The maintenance control center will be notified when an impoundment decision has been made.

9.12.2.1. (Added) The 309 MXW WOC, DSN 777-3238 will be notified when an impoundment decision has been made within the 309 MXW.

9.12.2.2.1. (Added) 309 AMARG Job Control will initiate checklist/event notification to levels of 309 AMARG supervision by email.

9.12.2.2. (Added) Contact the 309 MMXG MOC (777-6618 or 777-6619) for impoundment within the MMXG. MOC will notify 309 MXW WOC, 777-3238, and MMXG Quality Assurance (QA).

9.12.2.3. (Added) Contact the 574 AMXS/PA Control Room for impoundment within the AMXG. 574 AMXS/PA Control Room will notify the 309 MXW WOC.

NOTE: (Added) If the 309 AMXG Control Room is closed, notify the 309 MXW WOC.

9.12.3.1. (Added) Impoundment official will:

9.12.3.1.1. (Added) Initiate AF Form 2519 V-5 and develop actual checklist.

9.12.3.1.2. (Added) Review and complete all sections of applicable and developed checklist.

9.12.3.1.3. (Added) Attend the aircrew debriefing (if possible), or be debriefed by aircrew (if required).

9.12.3.1.4. (Added) Review the aircraft binder (AFTO Forms 781) and record jacket to determine if the aircraft has a history of the discrepancy and if maintenance was performed on that system, or in that area. (For F-22, this will be accomplished in the IMIS forms section of the PMA).

9.12.5.2.1. (Added) Make an entry in the AFTO 781A to ensure all recoverable stored data is collected prior to application of electrical power, if applicable. (For F-22, this will be accomplished in the IMIS forms section of the PMA).

9.12.6.1.1. (Added) All parts removed pertaining to the impoundment will be assessed for the necessity of QDR or Material Deficiency Report (MDR) procedures. The team can access the QDR System according to TO 00-35D-54-WA-1.

9.12.7.1. (Added) Conduct a preliminary investigation and ensure no maintenance is performed that will hinder the proper investigation of the impounded aircraft or equipment.

9.12.7.2. (Added) The impoundment official may release the aircraft for maintenance after conducting a preliminary investigation and forming an action plan to determine the cause of the discrepancy and a correction for the problem. Enter "AIRCRAFT RELEASED FOR MAINTENANCE IAW AFI21-101_Chapter 9B in the corrective action block of the AFTO 781A entry made in step **9.12.1.1.4.** of this instruction. Signature of the impoundment official is required in the "Inspected By" block only. (For F-22, this will be accomplished in the IMIS forms section of the PMA).

9.12.7.3. (Added) Ensure all work done on aircraft is properly documented in the active AFTO Forms 781 and the appropriate depot work control document. (For F-22, this will be accomplished in the IMIS forms section of the PMA).

9.12.7.4. (Added) Review the applicable maintenance forms with impoundment team members and technicians to ensure impoundment problem has been solved.

9.12.7.5. (Added) After reviewing the AFTO 781 forms, sign off the corrective action “FORMS AND CORRECTIVE ACTION C/W (Complied with). Signature of the impoundment official is required in the “Inspected By” block only. (For F-22, this will be accomplished in the IMIS forms section of the PMA).

10.10. (Added) Tool Management Concept. The purpose of the Tool Control Program is to eliminate the proliferation of duplicate, excess, or infrequently used tools. The 309 MXW is responsible for the management of the Tool Control and Accountability Program. Tool Crib/Production Support Center (PSC) is responsible for the acquisition, storage, and issue of all tools for the industrially-funded maintenance area organizations. Any tool purchases, to include Government Purchase Card tool purchases, must be authorized by the center/wing tool manager. The center tool manager is the person appointed by the (OO-ALC/CC) to ensure tool control policy compliance, and provide guidance within the center. The group Tool Control Manager (TCM) is the person appointed by the group commander to address all matters related to the Tool Control and Accountability Program within the organization. Any additional organizational procedures or methods of tool control may be published in an organizational Operating Instruction (OI) to this supplement.

10.10.1. (Added) Tool Control Program: Each group will establish a TCM position and one alternate. Squadron or flight tool monitors may be established as needed. The TCM and alternates name, office symbol and phone number must be submitted, in writing, from respective groups or squadron/flight to the center tool manager within 21 days of appointment. Tool managers are members of the center Tool Integrated Process Team. American Federation of Government Employees Local 1592 will have a member appointed by their president.

10.10.1.1. (Added) Tool Crib/PSC will maintain a stock of common hand tools (including specialty tool kits (TKs) for temporary loan. These tools will only be loaned to employees and supervisors with a valid tool card. Common tools may be checked out for 5 days, while high demand items (e.g., torque wrenches, crimpers, micrometers, F-16 wing kits, C-130 attachment bolt kits, sealant guns, etc.) will be loaned for a single shift only. The responsible mechanic will inventory temporary loaned TKs that are not returned during the same shift and annotate the AFMC Form 309 *AFMC Tool Control Inventory Record*. Temporary loaned tools are subject to all lost tool reporting procedures and must be returned to the point of issue. Tools not returned within the prescribed time will be considered delinquent.

10.10.1.2. (Added) Tool Crib/ PSC will notify supervisors/mechanics of delinquent tools on the Hill AFB Tool Management, Facility and Equipment Maintenance System (FEMS) Web Page. A link is provided on the 309th Maintenance Support Group web page (<https://apefemp1.hill.af.mil/maximo/webclient/login/login.jsp>). Supervisors are responsible to check this site weekly and notify employees if they have delinquent tools and instruct them to return the tools within 7 days of being notified. Employees with delinquent loaned tools will not check out additional tools until the delinquent tool record is reconciled.

10.10.1.3. (Added) If the non-tool crib/PSC procured item is to be controlled and issued from the tool crib, the tool crib/PSC tool crib attendant receives the item from the supervisor, serializes the item, and transfers it to the appropriate tool crib so it can be issued out.

10.10.2.1. (Added) 309 AMARG Process Directors are responsible for the implementation of the 309 AMARG Tool Control and Accountability Program. The Chief Forward Supply (MXDUAA) as the center TCM will establish policies and procedures IAW AFI 21-101_AFMCI 21-101 SUP1, Chapter 10B, *Tool and Equipment Management*, AFMCI 21-127, *Depot Maintenance Plant Management*.

10.10.2.1.1. (Added) The safety requirements of AFOSHSTD 91-66, *General Industrial Operations*, will be strictly adhered to by all 309 AMARG personnel using tools.

10.10.2.1.2. (Added) In the 309 AMXG, tools that are stored permanently in a tool pouch, leather case, or canvas tote bag, will have a list of the tools contained in them for inventory purposes. If these pouches, cases, or bags are the TK and not part of another TK, they will have a *Tool Kit Custody Receipt Listing* (TKCRL), if required a supplemental list, AFMC Form 309, and be inventoried as a TK with appropriate ID markings.

10.10.5. (Added) Upon taking custody of an Individual Tool Kit (ITK), the kit owner will externally mark the kit with their last name, first initial and organizational symbol. The kit owner will internally mark the kit, i.e., inside any tool drawer, with the tool kit number. Each drawer of the TK must be numbered externally and the TKCRL will reflect the drawer location of each tool. Consolidated Tool Kits (CTKs) will have the kit identification (ID) number and Resource Control Center (RCC) placed on the outside of the kit. Each drawer of the tool kit must be numbered externally and the TKCRL will reflect the drawer location of each tool. For tool kits that use drawers of a workbench, workstation, cabinet or vidmar to store assigned tools, each drawer that is part of the tool kit will be marked "Drawer 1", "Drawer 2", etc. If the drawer does not have such marking, it will be considered not part of the tool kit. Empty/extra drawers within a tool kit, workstation, or workbench will be marked "Empty" and left unlocked if possible.

10.10.8.1.1. (Added) The annual inventory of a PSC or a tool crib/PSC tool crib will be documented by attaching a cover letter to the inventory listing used to conduct the inventory that contains the following information; the crib inventoried, the date(s) the inventory was conducted, names of the individuals who participated in the inventory, discrepancies found, corrective actions taken, and the supervisor's name and signature.

10.10.13. (Added) Shop supervisor review of the AFTO Form 244, will be documented in Part IV of the AFTO Form 244 with review intervals of 180 days, at which time the AFTO Form 244 or computer generated equivalent will be reviewed for correctness and accuracy.

10.10.13.1. (Added) 309 MXW will only use "center approved" computerized maintenance management systems for Depot Industrial Plant Equipment (DIPE), for equipment maintenance management and documentation purposes. The AFTO Form 244 will not be used to document for maintenance management and documentation purposes. Exception; hoists and cranes will use the AFTO Form 244 as outlined in AFOSHSTD 91-46, *Material Handling and Storage Equipment*, for the purpose of documenting prior to use inspection only.

10.10.13.2. (Added) Specific operator's maintenance on DIPE, or inspection of a specific nature, as identified on an AFMC Form 306, *Preventive Maintenance Instruction*, or equivalent and performed by the owning organization/operator will be documented on the AFMC Form 355, *Operator Maintenance Certification*. The AFTO Form 244 will not be used.

10.11.1. (Added) A primary objective of the Tool Control and Accountability Program is FOD prevention through strict tool control. The person issued a TK is responsible for control of that TK until a turn-in inventory is accomplished and documented.

10.11.1.1.1. (Added) ITKs are issued for use to a single individual. CTKs are issued to a supervisor for use by their crew. Dispatchable Tool Kits (DTK) are issued out to perform a specific task or for use by a specific Air Force Specialty Code, and is designed to be used outside the tool room or work center. One individual is responsible for the Tool Kit.

10.11.1.1.2. (Added) Tool Kits: A container or storage location that facilitates positive control of contents and ease of inventory for tools while issued to a mechanic. A TK may also be defined as a drawer in a cabinet/vidmar, bench, briefcase, leather pouch, or canvas tote bag. Any storage device containing tools will be subject to tool control procedures and will be marked IAW paragraph **10.11.3.1** of this supplement. A single individual will be issued and assigned responsibility for a TK. Tool kits will be issued, transferred or hand receipted by the Tool/Issue Control Element. Supervisors may assign an ITK to an employee within their shop via a *Temporary Issue Receipt* (AF Form 1297) up to 60 days. Control, issue, and inventory of all items within a CTK are the responsibility of the supervisor. Only employees authorized by the supervisor will use tools from a CTK. The supervisor must submit a Hill AFB Form 516, *Establish or Revise Tool Listings*, signed by a second- level supervisor, or equivalent, to the group tool manager to make changes to a TK.

10.11.1.1.3. (Added) 309 AMARG Tool Control and Tool Kit Identification.

10.11.1.1.3.1. (Added) All tools will be issued through the tool issue center and marked with the ID number before issue. Those too small to mark will be stored in such a manner that a missing tool would be identified at once. Each of these unmarked items will have an asterisk on the TKCRL. Items made of material impractical to laser-mark, for example, goggles, eyeglasses and plastic boxes, will be hand-etched. Personal tools will not be used at the work site per paragraph **10.10.15**.

10.11.1.1.3.2. (Added) ITKs/CTKs will be stenciled in 1-inch letters with tool box number, first initial, last name and shop ID prior to issue from the tool issue center.

10.11.1.1.3.2.1. (Added) Technician's personal items (rings, wallets, watches, etc.) may be stored in bottom drawer of tool kits by placing them in a zip lock bag or compartment marked personal items for the duration of their shift.

10.11.1.1.3.3. (Added) 309 AMARG tool ID numbers will have the Center Code "AM" followed by a number. This number will correspond to the kit ID number. Each tool in each kit will be laser-etched, legibly, with the tool kit number by tool attendants. The ID numbers will not be removed until the tool becomes unserviceable or is removed from the kit and returned to the tool issue center.

NOTE: (Added) 309 AMARG. If laser capability is not available, the alternate method is to hand-scribe the ID number. The tool must be re-etched as soon as laser capability is available. It will be the responsibility of the TCM to inform supervisors of the availability of the tool marking machine. It will be the supervisor's responsibility to ensure tools not marked with the laser are done so. All tools that are too large to fit into the laser-marking chamber will be hand-etched. Laser operators will not bypass any safety device to mark tools that will not fit into the machine.

Items used that are too sensitive to be marked with a laser or hand-etched, will be marked with stamp pad/hand written using indelible ink.

10.11.1.1.4. (Added) 309 AMXG individuals are responsible for their assigned tools. This responsibility includes tools that are on loan. All tools will be returned at the end of each shift or 5-day period as determined by the tool crib. CTK and Task Oriented Tool Kit (TOTK) custodians are responsible for tools on their TKCRLs. Tool crib attendants are responsible for accountability and control of tools and equipment in their respective cribs. Individuals and custodians will ensure their TKCRL is protected, legible, and accurate.

10.11.1.1.4.1. (Added) Employees not assigned to, but working in 309 AMXG, will follow these guidelines. Any tool or TK discovered unsecured during periods of non-use may be impounded by a squadron director or designated representative.

10.11.1.1.5. (Added) A separate AFMC Form 309 will be maintained in each TK for each shift that uses that TK. AFMC Form 309 will be annotated after the end-of-shift inventory each day the TK is used. The previous AFMC Form 309 will be stored/filed for a period of 90 days or until a supervisor review has been accomplished on the current AFMC Form 309.

10.11.1.1.6. (Added) All items in any TK (except personal items stored in the personal item drawer) will be listed on an inventory control listing whether it is the TKCRL or a supplemental listing.

10.11.1.2.1. (Added) Shadowing of tools listed from the (TKCRL) will be accomplished by 309 MXSS/MXDVAC.

10.11.1.2.1.1. (Added) Prior to issue, tools in new tool kits must fit properly in the pre-cut cut-outs.

10.11.1.3. (Added) Consumables will be stored separately from tools. If kept in a drawer of any TK, that drawer will be marked "Consumables".

10.11.1.3.1. (Added) The 309 AMARG RCC supervisor may authorize consumable items, such as safety wire and tape, as part of the tool kit. These items will be added to the supervisor's and employee's copy of the TKCRL and will have an individual indentation in the tool kit. This entry is not required for the master Custody Receipt Listing (CRL). Inventory procedures for issue and turn-in of kits will include consumable items. ID numbers will be indicated on the outside of the spool of wire or tape when feasible. Common hardware, such as screws, nuts, cotter keys, splices, etc., does not fit this category and will not be authorized as part of the tool kit.

10.11.1.3.1.2. (Added) Tool Kit Content Determination. The production engineer or planner, production supervisor, Group TCM, and technicians (users) are responsible for defining the composition of tool kits required for new workloads. These TKs must be approved through the product group engineering and planning section at squadron level prior to submission to Tool Crib/PSC for implementation. TKs being changed due to a biennial review do not require the production engineer or planner's coordination or approval. Hill AFB Form 516 is required to establish a new TK template or to revise or delete an established TK template. Each type of standardized TK will be assigned a TK template number. Hill AFB Form 516 must have a complete list of required tools, including national stock number (NSN), nomenclature and issue quantity, and coordinated through the product group TCM before they are forwarded to 309 MXSS/MXDVAC.

10.11.1.3.2. (Added) TKCRL Management. The tool issue center located in the tool crib/PSC will manage the TKCRL. During the TK issue, the tool attendant and the employee will ensure the TKCRL, and TK quantities match and are accurate to include drawer markings and locations. The employee and tool crib attendant will sign the TKCRL. The master will be kept by 309 MXSS/MXDVAC, with one copy provided for the first line supervisor to be maintained on file, and one copy will be placed in a protective container (plastic bag, binder, etc.) and provided to the employee for retention in the TK. Out-of-stock items will be marked with a quantity of zero (0) on the TKCRL, annotated back ordered, and placed on back order. When these items are received, the responsible employee will initial and date all three copies of the TKCRL. The TKCRL master copy will be used as the turn-in document for employees when they leave an organization or when they terminate employment. All other additions, deletions or changes to the TKCRL will be accomplished by the tool crib/PSC Tool Issue Center personnel only, and will be reflected on all three copies (master copy provided by the crib, the supervisor's and the employee's copy provided by the mechanic) of the TKCRL. The crib attendant and kit owner will initial these changes. Any line item on the TKCRL that requires the number of pieces to be annotated will be filled in by the crib attendant and initialed by both the mechanic and crib attendant. The tool kit owner (i.e., mechanic or supervisor) will ensure drawer locations are forwarded to the tool crib/PSC so the TKCRL can be permanently updated to include items sorted by drawer location.

10.11.1.3.3. (Added) 309 AMARG Tool Issue Center Management and Operations. Tools will not be issued from the tool issue center without a security badge or a letter of authorization from the division chief for temporary issue. Contracted Services will operate the tool issue center IAW AFI 21-101 and AFMCI 21-127.

10.11.1.3.4. (Added) Tool Kit Issue and Turn-in.

10.11.1.3.5. (Added) Tools on back order will be tracked in the FEMS tool module and a receipt issued to the TK owner. The receipt will be date stamped to provide backorder visibility. On new kit issues a quantity of zero (0) will be annotated on the TKCRL for the backordered item.

10.11.1.3.6. (Added) The supplemental list is a listing of all items kept in TKs that are not listed on the TKCRL. A supplemental listing will be generated for containers not issued by the tool crib, consumables, personal equipment, shop equipment and local manufactured or modified tools, etc. Supplemental listings will contain, at a minimum, the NSN and/or part number (if applicable), nomenclature, size (if applicable), quantity, drawer location, and TK identification (ID) number. The supplemental list will be signed and dated by both the employee and the supervisor immediately after the last entry on the list. A copy of the supplemental list will be kept with the TKCRL and on file by the supervisor. Use AF Form 3126, *General Purpose 81/2X11* or AF Form 3136 *General Purpose 11X81/2*.

10.11.1.3.7. (Added) Common accessories and support equipment, when maintained in a TK, will be annotated on a supplemental list, marked with the TK ID number. They are subject to inspection requirements and lost tool reporting procedures.

10.11.1.3.7.1. (Added) Air nozzles issued as part of a TK are considered a tool and will be accounted as such. Quick disconnect fittings when used on a TK issued air nozzle will be securely attached and accounted for as part of the air nozzle on either the TKCRL or the supplemental listing. Nozzles issued with equipment items will be marked and tracked as Shop Machine Accessory/Attachments. A nozzle not issued as part of a TK and permanently attached

to an air hose will assume the identification of that air hose and will be controlled as support equipment. Air nozzles needed for support equipment hoses, which becomes a modified tool, will be ordered from the tool crib by submitting a Hill AFB Form 515, *Tool Request/Turn In*.

10.11.1.4. (Added) Expendable items are items that must be frequently replaced due to high use, excessive wear, breakage, or otherwise become unfit for use. Expendable tools include: drill bits, apex bits, torque bits, end mills, cutters, scrapers, 3/16" and smaller punches, razor blades, knife blades, saw blades, sanding pads (Roloc pads and/or arbors), etc. Such items requiring replacement due to usage or breakage will be exchanged on a one-for-one basis as soon as possible, but not to exceed 3 working days. Every attempt will be made to recover and return all pieces of broken expendable tools to the tool crib/PSC prior to replacement. If the tool or a significant portion is lost, a copy of a completed AFMC Form 310, *Lost/Found Item Report*, must be presented before a replacement tool may be issued.

10.11.1.6.1. (Added) All TK's with separate containers/side box attached will be listed on the TKCRL. This container/side box will NOT be used for storage of items (e.g., newspapers, magazines, books, groceries, shop equipment, or spare parts etc.). Personal equipment and personal protective equipment maintained in the TK and separate container/side box will be subject to inspection requirements and lost tool reporting procedures. Containers/side box attached to the TK not listed on the TKCRL are not approved.

10.11.1.6.1.1. (Added) CTKs will not contain personal drawers unless authorized by the CTK owner via e-mail to the group TCM. Responsible CTK user will ensure all personal items placed in a personal drawer will be removed at the end of the shift or upon turn in.

10.11.1.6.1.2. (Added) In all 309 AMXG restricted F-22 Raptor areas personal items will be controlled by removing items and placing them in an issued personal pack. Personal packs are zippered canvas pouches worn around the waist and secured by an adjustable belt. They are used to control loose personal items (i.e. jewelry, wallet, pens/pencils, keys etc.) that create a potential FOD hazard. Packs must remain closed unless being accessed. For tasks where operational or space constraints prohibit its use, the personal pack may be temporarily removed IAW 309 AMXG established policy for control of personal packs during removal. Personal packs are for personal items only. Under NO circumstances shall anyone carry tools, consumables, foreign objects (FO), residue, miscellaneous small parts or hardware in their personal pack. Badges will be removed and placed in the clear pocket compartment on the front of the pack.

10.11.1.6.2. (Added) Miscellaneous equipment (e.g., date stamps, ink pads, etc.) are non-tool items necessary for the completion of assigned tasks. Miscellaneous equipment if maintained in the TK will be listed on the supplemental list, shadowed, and marked with the TK ID number. Maintenance stamps and their caps when maintained in the TK, will be marked IAW Chapter 19, paragraph 19.4.1.1.3.2.1. of this supplement, shadowed and put on the supplemental list as stamp and cap.

10.11.1.7. (Added) Personal Protective Equipment (PPE). PPE kept in an ITK will be marked with the ITK number. Each item placed in this area will be listed on the supplemental list, marked with the tool kit number and shadowed.

10.11.1.7.1. (Added) PPE not stored in an ITK will be stored in a personal or PPE locker. These items will be marked with the last name and first initial of the owning individual.

NOTE: (Added) Shop PPE – PPE that is intended for shop use i.e., face shield for shop use at a drill press, will be marked with the owning RCC.

10.11.1.7.2. (Added) All non-disposable PPE will be exchanged on a one-for-one basis. AFMC Form 310 will be initiated for all lost non-disposable PPE.

10.11.2. (Added) Tools removed from a TK used by more than one person will be tracked by one of the following methods: 1) AFMC Form 62, *CTK Inventory and Control Log* which, at a minimum, will contain tool nomenclature, date out/in, location of use or end item, name of borrower; 2) by using a “chit” system or electronic equivalent; 3) by using a electronic keyed device on a tool kit, (swiping of the tool card to sign in or out of the tool kit) the following information must still be provided, through a printable report, tool nomenclature, date out/in, location or end item of use, name of borrower.

10.11.2.1. (Added) Copies of AFMC Form 62 must be kept for a minimum of 90 days for inventory purposes.

10.11.2.2. (Added) The quantity of chits issued to an individual will be annotated and a record kept by the person who issues the chits. Chits will be marked with the mechanic’s TK ID number and the work center office symbol. (If no kit is issued then the supervisor must provide the means to identify the individual). Chits, when kept in a TK, will be shadowed or placed in containers. If placed in containers, the containers will be controlled IAW AFI 21-101.

10.11.2.3. (Added) 309 AMARG Chit System. 309 AMARG locally devised tool chits from the tool issue center will be used when withdrawing tools from a CTK. The chits will be ID numbered to correspond with each CTK and issued by the tool issue center as part of the tool kit. The chits will be documented on the TKCRL. Tool kit custodians will ensure that all chits are accounted for at the end of each shift. An AF Form 1297 may be used in lieu of chits.

10.11.2.3.1. (Added) Supervisors with personnel in their work centers who do not have an ITK assigned, but use tools from a CTK may use the following procedures instead of using AF Forms 1297 for CTK issue.

10.11.2.3.2. (Added) Supervisors may request, in writing, that chits be made for their respective work area. Chits will be made with the work center’s office symbol and a number (i.e., MABA001 thru MABB040 etc.). The supervisor will sign for the chits from the tool room. Tool room personnel will maintain the letter on file. The supervisor may sign out all chits to an individual by AF Form 1297, or maintain a log with a signature block and get each individual to sign by the chit number assigned.

10.11.2.3.3. (Added) Chits will be left in each CTK cut out when the item is removed. Leaving a single chit for tools with multiple cutouts does not meet the intent of this instruction.

10.11.2.4. (Added) 309 AMXG will NOT use a chit system in any area. In areas where a computer system is impractical, such as production CTKs, a sign-out sheet will be used, (i.e. AF Form 3126 overprint). Headings will contain, at a minimum, the following information: tool identification number, borrower’s name or employee number, work area where the tool is to be used, date checked out, and date returned.

10.11.2.5. (Added) 309 MMXG CHIT SYSTEM: When the chit system is used, each mechanic will be issued eight (8) chits with their M-stamp and/or ITK number and work center office symbol on them. When a mechanic uses a tool out of a CTK, they will place a chit in the

tool's place in the CTK until that tool is returned to its place. Chits placed in tool drawers/shelves will be controlled as a tool. If a chit system is used, the using flight will:

10.11.2.5.1. (Added) Chits will be secured by the supervisor and issued only to the assigned technicians.

10.11.2.5.2. (Added) The quantity of chits issued to a technician will be annotated in a log kept by the supervisor. When using a chit system, chits are controlled as tools to include a beginning and end of shift inventory.

10.11.3. (Added) 309 AMXG accountability for tools and equipment purchased outside of the normal tool crib/PSC acquisition process is the responsibility of the 309 AMXG supervisor. The tool and equipment acquisition source (i.e., engineering) will ensure all procured items are given only to a 309 AMXG supervisor or foreman that initiated the request. It will be the supervisor's responsibility to take the tool or equipment item to the tool crib/PSC to have a traceable TK number lasered onto the item.

10.11.3.1. (Added) All TKs will be assigned a TK ID and each tool in the TK will be marked, with the TK ID number, prior to initial issue. Tools being replaced will be marked prior to replacement by assigned tool crib personnel. Tools that are listed with an asterisk on the TKCRL will not be marked. Tools will be laser marked where possible. Laser marking of tools is the preferred method.

10.11.3.1.1. (Added) ITKs will be marked on the outside of the TK with the owner's last name and first initial and organizational symbol in any order. ITKs will also be marked with the TK ID number on the inside of the TK in an area not visible from the outside of the TK. CTKs will be marked on the outside of the TK with the ID number and organizational symbol. DTKs will be marked on the outside of the TK with the ID number and the organization symbol.

10.11.3.1.1.1. (Added) External mounted devices such as vices will be marked under the mounting block to prevent the TK number from being easily viewed, and will be subject to inspection requirements and lost tool reporting procedures.

10.11.3.1.1.2. (Added) The center TCM will authorize and approve all TK ID numbers used by Depot Maintenance Activity Group (DMAG) maintenance operations and the 75th Air Base Wing. Tool Crib/PSC is the only section authorized to issue, change or delete TK ID numbers. Tool Crib/PSC personnel will control access to all laser marking equipment in their possession.

10.11.3.3.1. (Added) Tools made of a material incapable of lazering or etching, i.e., rubber, rawhide, plastics etc., shall be marked with a permanent marker. If the marking becomes illegible, the tool will be remarked before the end of the shift.

10.11.3.5.1. (Added) Military units will mark their mobility TKs for deployment IAW AFI 10-403, *Deployment Planning and Execution*.

10.11.3.6.1.2. (Added) Precision Measurement Equipment (PME) also referred to as Test, Measurement and Diagnostic Equipment (TMDE), in TKs will be tracked IAW AFI-21-101 AFMC_Sup_1, paragraph**10.11.3.6.1.** PME will be annotated on the TKCRL and marked with an asterisk. PME items assigned to a PSC will have an ID number assigned by use of the PME tracking number. The owning organization's TMDE monitor will be responsible for routing PME items for calibration. PME items maintained in a TK will either be individually shadowed

within the TK or be placed in containers. If placed in containers, the container will be controlled IAW AFI 21-101_AFCM_Sup_1, paragraph 10.11.3.6.3.

10.11.3.6.1.3. (Added) TMDE monitors will issue a receipt to be kept in the TK for tools removed for calibration, certification or repair. (When a TMDE item is turned into the TMDE monitor for calibration, the TK owner will receive a copy of a Precision Measurement Equipment Lab [PMEL] hand receipt.)

10.11.3.6.1.4. (Added) PSC/Tool Crib TMDE requirements:

10.11.3.6.1.4.1. (Added) The PSCs in the group will be responsible to monitor for scheduled calibration TMDE in TKs in the division and in the PSCs.

10.11.3.6.1.4.2. (Added) PME TMDE will be maintained IAW TO 33K-1-100-1 Technical Manual, *Calibration Procedures for TMDE Calibration*, notes, *Maintenance Data Collection Codes and Calibration Measurement Summaries*, and TO 00-20-14 “*Air Force Metrology and Calibration Program*.”

10.11.3.6.1.4.3. (Added) Initial issues of TMDE in TKs will be turned in to the PSC TMDE monitor for addition to the FEMS inventory tracking system and calibration before the TMDE is used.

10.11.3.6.1.4.4. (Added) TMDE is tracked and scheduled in FEMS. The PSC TMDE monitor is notified by the PMEL to identify the TMDE due calibration. The PSC TMDE monitor will notify the supervisor of the TK owner by e-mail, requesting the TMDE be brought to the PSC to initiate the calibration process. If the requested item is not turned in within 7 days, the TMDE monitor will continue to elevate the request until the item is received.

10.11.3.6.1.4.5. (Added) When the TMDE is received in the PSC to be routed to PMEL; the PSC monitor will attach the scheduling form with all appropriate information.

10.11.3.6.1.4.6. (Added) When the PMEL driver takes delivery of the TMDE from the PSC, PSC TMDE monitor will ensure the PMEL driver signs a hand receipt for the TMDE. The PSC TMDE monitor will file the hand receipt in a file in the PSC until the TMDE is returned from PMEL. When the TMDE item is returned from PMEL, the PSC TMDE monitor will ensure the signed hand receipt is returned to the driver.

10.11.3.6.1.4.7. (Added) When the production technician presents the TMDE to the PSC TMDE monitor for calibration, the PSC TMDE monitor will give a copy or receipt of AFMC Form 94, to the TK owner. The TK owner will place the copy or receipt in the shadowed or silhouetted spot in the TK. The TK owner should check with the PSC if the TMDE is not returned within 30 days.

10.11.3.6.1.4.8. (Added) Upon return of the TMDE from PMEL, the PSC TMDE monitor will ensure the proper certification labels are attached to the TMDE before issue and the labels are correctly filled out. If the TMDE labels are not filled out correctly, the TMDE monitor will contact PMEL to correct the label.

10.11.3.6.1.4.9. (Added) If the TMDE has an AFTO Form 398, *Limited TMDE Certification Label (Yellow)*, or an AFTO Form 99 *Limited/Special TMDE Certification Label* attached, the PSC attendants will initial the initial block on the AFTO Form 398 for TMDE assigned to the PSC. If the TMDE is going into a TK, the supervisor or alternate supervisor or TK owner will initial the initial block on the AFTO Form 398 or 99. These labels are used to alert the user that

the TMDE is certified with a limited or special calibration for use. The TK owner will be responsible to ensure the limited use TMDE complies with the requirements of the task before use.

10.11.3.6.1.5. (Added) 309 AMARG Precision Measurement Equipment (PME). AMARG PME follows the standard loan procedures but will not be issued to anyone if the calibration date will expire within 7 days. Exception is an emergency condition which allows loan until the calibration date.

10.11.3.6.2.1. (Added) Tools impractical to mark will be listed on the center asterisk list. They will be identified with an asterisk (*) on the TKCRL. Tools impractical to mark but are large enough to make a representative impression may be individually shadowed. Addition or deletions will be authorized via e-mail by the center tool manager.

10.11.3.6.3. (Added) When chits are no longer required they will be returned to the person who issued them to ensure control and accountability. Chits will be subject to inspection requirements and lost tool reporting procedures. In the event a chit is lost, an AFMC Form 310 must be completed for chit replacement.

10.11.3.6.3.1. (Added) Tools too small to mark. Allen wrenches, apex/torque bits, drill bits, taps, dies, rotary files, and other small items that are asterisked will be stored in a container. These items will be identified by an asterisk on the TKCRL. The container will be marked to include all pieces (e.g., 12 Allen wrenches in a container/case can be 12 pieces and case) and will be marked with the TK ID number and shadowed in the TK. Small tools in the container itself do not need to be shadowed/foamed.

10.11.3.6.3.1.1. (Added) Containers (cases, pouches, tubes, boxes, etc.) will be shadowed and marked, lazered, etched or marked with permanent marker with the TK number, and quantity. Lids or caps will be listed only if they can be separated from the container making two individual pieces. If an identification number becomes illegible, the tool kit owner will remark the container by end of shift.

10.11.3.6.4. (Added) All pocket clips not permanently attached will be removed from tools “if possible” (penlights, continuity testers, small screwdrivers, etc.) prior to placement in tool kits.

10.11.3.6.5. (Added) 309 AMARG. The AFMC Form 309, AFMC Tool Control Inventory Record, and folder/envelope will not be annotated on the TKCRL, as they will remain an integral part of the tool kit.

10.11.3.6.5.1. (Added) Certification stamps do not require the ITK number, but will be tracked IAW the stamp control program. The stamps may be kept in the ITK if the following stipulations are met:

10.11.3.6.5.2. (Added) Certification stamps must be added to both the supervisor's and employee's copy of the TKCRL.

10.11.3.6.5.3. (Added) 309 AMARG-Only stamps must be shadowed in drawer.

10.11.3.7. (Added) Material Inventory Centers (MIC), Shop Support Centers (SSC) and Weapons System Support Centers function as a mini-supply storage area to provide parts and materials. They are not authorized to issue tools (e.g., all brands or types of flashlights, knives, utility knives, multi-tools, magnifiers etc.) unless specifically authorized by the center tool manager, in writing.

10.11.3.10.1. (Added) 309 AMXG TK used in flight test areas will require all tools used on each aircraft be returned to the TK after completion of task, and the checkout log reviewed by the crew chief prior to the scheduled launch of any aircraft.

10.11.4.2. (Added) Rag Control Procedures. The following procedures will be used for control of rags and paper products.

10.11.4.2.1. (Added) Each group will be responsible to ensure cloth rags are controlled and accountable when used in maintenance processes that require closure procedures or final assembly. PSCs or their functional equivalent (this may be a supervisor when necessary) will have the responsibility for the issuance and receipt of cloth rags (as required above) used in that functional area.

10.11.4.2.2. (Added) The PSC or functional equivalent will verify and record the number of cloth rags issued to an individual in a written or electronic rag tracking log.

10.11.4.2.3. (Added) Cloth rags will be controlled IAW this supplement, all FOD requirements and the base Hazardous Waste Management Plan. Cloth rags (when used in a closure or final assembly process) will be returned to the issue point, counted and verified by the PSC or functional equivalent. When cloth rags are returned, the person receiving them will annotate in the written or electronic rag tracking log, that the items have been returned. AFMC Form 310 Lost Tool/Item Report must be initiated for any cloth rag (when used in a closure or final assembly) that cannot be accounted for.

10.11.4.2.4. (Added) All employees that perform maintenance in high-FOD potential areas, on aircraft, engines, and accessories or that provide a service to these organizations, will perform an inspection of the work area prior to closing out a task, or moving to another area, to ensure that cloth rags have not been inadvertently left in the area.

10.11.4.2.5. (Added) Applicable groups will establish specific requirements for control of paper products when used in a closure or final assembly. Any paper products used will meet with all FOD requirements and the base Hazardous Waste Management Plan.

10.11.4.3. (Added) 309 AMXG Rag Control. A rag is defined as a remnant of cloth (or synthetic material) purchased in bulk or a standardized commercial quality, Government/vendor-supplied shop cloth used in general industrial, shop, and flight line operations. The program objective is to establish rag issue and receipt procedures to ensure strict control and prevent the potential for aircraft foreign object damage. Support and constant emphasis from all levels of management is required for an effective and positive rag control program.

10.11.4.3.1. (Added) 309 AMXG Responsibilities and Procedures:

10.11.4.3.1.1. (Added) 309 AMXG Maintenance Material Support Division Hazardous Distribution Support Centers (HDSC) are responsible to provide initial issue of individual rags to production workers that will frequently require rags for normal duties. FEMS will be used to track this issue. The HDSC and the individual to whom rags are issued will perform a joint issue and return inventory.

10.11.4.3.2. (Added) Cheesecloth is considered a rag and falls under the same 309 AMXG restrictions for control as prescribed in the rag procedures.

NOTE: (Added) AMXG Cheese/rymple cloth bought in precut uniform sizes can be used for standard issue size requirements. If purchase by roll and not precut, use paragraph **10.11.4.3.2.1** below for uniform size requirement.

10.11.4.3.2.1. (Added) Cheese/rymple cloth that is received in un-precut rolls will be cut to a standard size of approximately 24" x 24" sections by HDSC personnel. This will be done to conform to requirements of standard size for rag accountability.

10.11.4.3.2.2. (Added) Cheese/rymple cloth will then be issued the same as the regular rag process.

10.11.4.3.2.3. (Added) Cheese/rymple cloth will be turned-in or disposed of in hazardous waste containers the same as rags to verify a one-for-one accountability.

10.11.4.4. (Added) 309 AMXG paper products will not be used unless specifically required for technical process. Paper products on any aircraft, engine, munitions, missile, support equipment, aerospace ground equipment (AGE), or component will maintain requirements of regular rags (i.e., they will be uniform in size). Any paper products used as rags will be controlled through HDSC and will be accounted for under the same one-for-one basis.

10.11.4.4.1. (Added) All rag control (i.e., issue and turn-in) will be accomplished through HDSC personnel. This includes all types of rags available to 309 AMXG personnel (i.e., paint/blast, regular shop rag, cheese/rymple, and paper products used as rags). Rags will be accounted for on one-for-one bases to include verification steps for rags disposed of in the proper waste receptacles.

10.11.4.5. (Added) 309 AMXG employees shall place used rags in a sealed plastic bag (exception see paragraph **10.11.4.6.**) before taking scheduled breaks, before leaving the immediate work area, or after completing the process requiring the use of a rag. Clean/used rags shall be secured during periods of non use, (see paragraph **10.12.5** of this instruction) all used rags will be exchanged for clean rags prior to the end of employee's assigned work shift.

10.11.4.6. (Added) 309 AMXG solvent-laden, soiled, or Alodyne contaminated rags will not be in sealed plastic bags to reduce the possibility of spontaneous combustion, and will not be stored in a tool kit. Chemical-resistant saran-coated polypropylene bags, or equivalent, will be used to temporarily store soiled and solvent-laden rags until they are exchanged for clean rags. These rags shall be stored without sealing the plastic bag, fold the top over and place the weight of the rags or another object on the fold to close the bag and prevent air emission.

10.11.4.7. (Added) 309 AMXG; clean unused rags may be kept with the production worker in a plastic bag during production maintenance. Plastic bags can be obtained from the PSC or HAZMAT HDSC. They must be stored in a covered metal container (i.e., non-mobile personal locker, ITK, lockable metal drawer) or turned in upon completion of a duty day.

NOTE: (Added) 309 AMXG storage of clean rags in a tool kit (ITK, CTK, or DTK) is considered the primary storage location, when possible.

10.11.4.7.1. (Added) If rags are stored in tool kit they must be listed on the TK Supplemental Tool List. When stored in a TK, plastic bags supplied for use (for clean or used rags) will be marked with the ITK identification number and "XX Clean Rags and Bag." "XX" will indicate the number of rags.

10.11.4.8. (Added) 309 AMXG clean rags not stored in a TK will be controlled. The production workers will use an AFMC Form 309, *AFMC Tool Control Inventory Record*, to document daily inventory. This form will be maintained in the plastic bag with the clean rags. The AFMC Form 309 will list the production worker's Maintenance Stamp Number (M-stamp), current calendar year, and the production worker's assigned work center. The supervisor will annotate every 90 days an inventory of rags on the AFMC Form 309 in the "Supervisor's 90-Day Inspection" block.

10.11.4.9. (Added) 309 AMXG normal rags issue for individuals requiring rags is covered in paragraph 10.11.4.3.1.1. This paragraph identifies added requirements for infrequent users and work centers requiring exceptions to normal rag issue.

10.11.4.10. (Added) Any 309 AMXG individual assigned or matrixed to 309 AMXG requiring a rag or rags on an infrequent or "as needed" basis must report to the HDSC and sign them out using a hand receipt or tool card.

10.11.4.11. (Added) 309 AMXG requesting person will notify issuing personnel, at the time of the request, if large quantities of rags are required. If large quantities of rags are required for fluid absorption, specific preparation for paint and painting tasks, etc, these will be issued in bags of 25 count.

10.11.4.12. (Added) 309 AMXG production workers are responsible to ensure rags issued to them are controlled. Rags will be accounted for at the end of every task, shift, and prior to aircraft engine start. Lost tool/item procedures will apply. Production workers will confirm end of shift inventory by entering their initials next to the respective day on the AFMC Form 309.

10.11.4.13. (Added) 309 AMXG rags that cannot be accounted for will be immediately reported to the production worker's supervisor and will be covered under the lost tool/item reporting criteria as outlined in this instruction.

10.11.4.14. (Added) 309 MMXG Rag Control Procedures. Major component mating operations will require two-person certification prior to closure or mating to ensure FO free. WCDs will require an "I" or "E" code for these operations. The WCD will note: "Rag/FO inspection complied with".

10.11.4.14.1. (Added) Supervisor or designated employee will issue and account for rags on a preformatted AF Form 3126, available at the group Tool Manager's Office.

10.11.4.14.2. (Added) Use TO specified Rymple or Technicloth or lint free non-woven blended wipes in clean rooms.

10.11.4.14.3. (Added) All FOD requirements and the Base Hazardous Waste Management Plan apply.

10.11.4.14.4. (Added) AFMC Form 310 must be initiated for any cloth or paper product (rags) that cannot be accounted for.

10.11.4.14.5. (Added) Cloth or paper products (rags) will be accounted for in 309 MMXG designated high potential FOD Areas. Rags will be accounted for prior to panel closure, at the end of every task or shift, whichever occurs first, or moving to another area to ensure rags have not been inadvertently left in an area or product.

10.11.5.10.2.1. (Added) Point of Use Station (POUS). Items are added to POUS machines after production supervisor has given written approval. Written approval will be verified by the Quality Assurance Evaluator (QAE).for content. Initial stock lists are coordinated between material and production personnel.

10.11.5.10.3.1. (Added) Usage reports will be distributed each month to third-level supervision. The usage report must reflect the following minimum requirements; issued product, name of technician, quantity of issue, time/date of issue, and location of issue. Usage reports will be used to identify high pilfered items. Reports will be kept a minimum of 2 years.

NOTE: (Added) It is the responsibility of group supervision to identify high pilfered items. If identified as high pilfered then these items will be issued as a one-for-one swap.

10.11.5.10.3.2. (Added) These usage reports will be used to identify high pilfered items. If PPE is identified as high pilfered, (by group supervision), then these items will be controlled as a one-for-one swap.

10.11.5.10.3.3. (Added) POUS machines will be inventoried on a quarterly basis and identity tags verified for content. Minimum/maximum levels are reviewed at this time; slow or dead stock will be removed. Inventory accuracy is verified by QAE.

10.11.6. (Added) PSCs and Tool Crib/PSC will not duplicate items for temporary loan except those that may be contained in dispatchable TKs unless authorized by the center tool manager. product groups will be responsible to establish procedures and/or OIs that provide tool control guidance for their respective PSCs.

10.11.6.2.3. (Added) The annual inventory of a center PSC or a tool crib/PSC will be documented by attaching a cover letter to the inventory listing used to conduct the inventory that contains the following information; the crib inventoried, the date(s) the inventory was conducted, names of the individuals who participated in the inventory, discrepancies found, corrective actions taken and the supervisor's name and signature.

10.11.6.2.4. (Added) Tool crib/PSC PSC/tool crib responsibilities include:

10.11.6.2.4.1. (Added) The PSCs will obtain items through tool crib/PSC time compliance technical order (TCTO) kits issued by the F-16, C-130, A-10, or Missile Weapons System Support Center (571 AMXS/MXDXAB, 572 AMXS/MXDXAC, or 573 AMXS/MXDXAD) or from implemented suggestions.

10.11.6.2.4.2. (Added) Approved LM/MTs may also be controlled in the PSCs.

10.11.6.2.4.3. (Added) The planner, along with production, will involve PSC personnel (574 AMXS/MXDPAAA) on all kit proofing, first article, and prototypes. The journeyman technician assigned to the PSC will, along with the planner and production technician, evaluate the TK requirements for special tooling during prototype procedures. This will enable the PSC journeyman personnel to identify any tool shortages or other problems prior to the production process.

10.11.6.2.4.4. (Added) Special TKs will be issued directly to the PSC (574 AMXS/MXDPAAA) tool room. This will allow 574 AMXS/MXDPAAA PSC personnel to inventory the TKs, add new items to the master inventory list, and develop an itemized inventory of each TK.

10.11.6.2.4.5. (Added) Tool crib/PSC will issue identification numbers for each individual PSC. Identification system will consist of four alpha characters and four numeric characters. This identification will be marked on all TKs. All TKs will be shadowed or silhouetted for inventory purposes IAW instructions in this supplement.

10.11.6.2.4.6. (Added) All TKs issued for more than one shift will have an AFMC Form 309 for each shift. The TKs will be inventoried just as any other TK in the production area at the beginning of each shift, at the end of each shift, and annotated on the AFMC Form 309 in that day's blank on page 1.

10.11.6.2.4.7. (Added) If the inventories are not up to date, the PSCs will refuse to accept the TKs until they are updated. The PSCs will ensure a current copy of the itemized listing accompanies each TK when issued so inventories can be accomplished.

10.11.6.2.4.8. (Added) Temporary loans will be done by computer in the FEMS tool control program. In case of computer failure, a locally designed form (AF Form 3126) will be used to track the tooling issue. Tools will be loaned for the amount of time needed to complete the operation. Notices for tools past due will be sent via the FEMS system to the supervisor of the loanee. If, after initial written notification, the tool is not returned within times specified on that notification, the second-level production supervisor will be sent a letter detailing the situation.

10.11.6.2.4.9. (Added) Tooling fixtures required by TCTOs which require more than one shift or 1 day to complete will be returned as soon as the items are no longer needed.

10.11.6.2.5. (Added) 309 AMXG User Responsibilities:

10.11.6.2.5.1. (Added) To enhance the accountability of special tools or TKs, the employees issued the TK will account for all items when checked out. Employee will be responsible for the security of tools checked out for more than one shift.

10.11.6.2.5.2. (Added) Whenever a TK is checked out for more than one shift, an AFMC Form 309 will be kept in the kit for each shift to be used to document end-of-shift inventories.

10.11.6.2.6. (Added) 309 AMXG PSC Crib Responsibilities:

10.11.6.2.6.1. (Added) All TKs will be inventoried before and after issue to ensure they are complete and free of foreign objects (FO) by assigned crib personnel.

10.11.6.2.6.2. (Added) Annual TK inventories will be performed IAW AFI 21-101_AFCM 21-101_Sup.1.

10.11.6.2.7. (Added) 309 AMXG is to ensure the tooling generated into the PSC by TCTOs, etc., does not accumulate without control over the years. The following procedures will be followed:

10.11.6.2.7.1. (Added) When identified, the tool crib journeyman will send the weapon system planner a dated memorandum stating that no apparent requirements exist to retain the specific tooling. The weapon system planner will contact the item manager to ensure there is no valid reason for retaining the item. Unless a future requirement is identified within 30 days of the memorandum of notification, the tooling will be disposed of IAW existing directives for equipment turn-in.

10.11.6.2.7.2. (Added) When the weapon system planner identifies a potential future usage or desires to retain TCTO tooling as "insurance items", they will designate a person and location to

receive the tooling. The tooling will be removed from the tool crib and transferred to the specified person's custody account.

10.11.6.2.7.3. (Added) When the special tool or TK is no longer required for use, the employee will return the tool to the PSC. The PSC attendant will verify all tools are present and etched in the TK with the correct ID number. If no discrepancies exist, the special tool or TK will be returned to the PSC.

10.11.6.2.7.4. (Added) The PSC is designed to provide tools and expertise, which are not normally available in tool cribs. Assigned PSC technicians will issue the tooling. Journeyman technicians will be staffed in PSCs and will have a working knowledge of the tasks accomplished on the aircraft to assemble and maintain the proper tooling in this area.

10.11.6.2.7.5. (Added) PSCs will be maintained in an orderly fashion for ease of accurate inventory.

10.11.6.2.7.6. (Added) The issue window will be staffed on day and swing shifts.

10.11.6.2.8. (Added) 309 AMARG PSC Management and Operation. 309 AMARG's PSC is established to control the loan of tools, support equipment, locally manufactured tools/equipment, and Custodian Authorization/Custody Receipt Listing (CA/CRL) items that could be left in FOD critical areas.

NOTE: (Added) 309 AMARG, during the duration of the loan, the individual signing for the loan item must perform all required inventory and user maintenance actions. Ensure employees sign AFMC Form 311, *Certificate of Responsibility for Government Property*, prior to issue of the tool IAW AFI 23-111, *Management of Government Property in the Possession of the Air Force*.

10.11.6.2.8.1. (Added) 309 AMARG Control of CA/CRL Items. Items or equipment on AMARG's holding account, CA/CRLs that could be left in a weapons system or component thereof will be controlled. The flight chief will identify these items in coordination with 309 SPTS/MXDUAA personnel.

10.11.6.2.9.1. (Added) All items are etched with identification number "AMTR" plus the number.

10.11.6.2.9.2. (Added) A brass chit is placed in the drawer of an issued item to indicate an issue has been made.

10.11.6.2.9.3. (Added) A silver chit is placed in the drawer of an item out for calibration or reorder.

10.11.6.2.9.4. (Added) A daily inventory is conducted on all drawers for which an item has been issued.

10.11.6.2.9.5. (Added) A weekly inventory is made of all items in the PSC. Missing items are reported to the TCM for search and possible preparation of a lost tool report.

10.11.6.2.9.6. (Added) A 309 AMARG supervisory inventory is made by the TCM annually.

10.11.6.2.10. (Added) 309 EMXG Production Support Center (PSC) (Kadena): The PSC at the Support Center Pacific (SCP) is authorized to order direct from the manufacturer and manage their tool crib. The PSC manager will report to the 309 MXSG/MXDVAC tool crib supervisor

and 309 EMXG TCM upon request by electronic medium. The report must contain tools purchased by nomenclature, NSN, quantity and dollar amount, tools exchanged by vendor, and tools turned in to DRMO; a report consisting of a supply listing and copies of DRMO turn-in paperwork will be included. Kadena will use FEMS to manage their tool program. The PSC manager will ensure an annual inventory of all items in the PSC be completed and documented.

10.11.7.1.1. (Added) Temporary loaned tools checked out from the tool crib or PSC may be stored in the employee's ITK, but not in their personal drawer. These items will not be on loan for more than 5 calendar days. If tools are required for more than 5 calendar days, the location of the tool must be physically verified and the loan must be renewed.

10.11.7.1.2. (Added) Dispatchable TKs. DTKs assigned and maintained within a PSC or 309 MXSS/MXDVAC tool crib will require an AFMC Form 309 to document inspections as follows: If the TK is issued and returned to the PSC or 309 MXW tool crib/PSC during the same shift or day, no documentation is required, as issue and return accomplishes the required inspections. If the TK is not returned during the same shift or day, the responsible mechanic will complete all required inspections and annotate page 1 of the AFMC Form 309. Pages 2 and 3 may be used as required and page 4 will be used to document lost tools. A 90-day inspection of dispatchable TKs assigned to a PSC or tool crib/PSC is not required but they will be included as part of the required annual inventory IAW AFI 21-101, paragraph **10.10.8**. For each issue and return, the issue center attendant and mechanic will inspect dispatchable TKs that belong to a PSC or 309 MXW tool crib/PSC.

10.11.7.1.3. (Added) 309 AMARG Loaned Tools. All loaner tools will normally be issued through the PSC and marked with the 309 AMARG ID number.

10.11.7.1.4. (Added) 309 AMARG Temporary Issue Tools. Tools issued on a temporary basis will be issued for a 30-day period. If the tools are needed longer than 30 days, they must be returned at the end of the 30 days for serviceability check and reissued for another 30-day period. Issue of temporary tools will be accomplished using the FEMs System. A copy of the computerized listing will be given to the employee and must remain in the tool kit until the tool is turned in. A delinquent tool report will be accomplished weekly and a copy will be sent to the supervisor of personnel who have delinquent tools. Personnel with delinquent tools will not be issued more tools until the overdue tools are turned in. Tools with limited availability will be loaned for the duration of the shift during which these are borrowed. Expendable/consumable tools will be issued one for one.

NOTE: (Added) 309 AMARG, during the duration of the loan, the individual signing for the loan item must perform all required inventory and user maintenance actions. Ensure employees sign AFMC Form 311, prior to issue of the tool IAW AFI 23-111. A 309 AMARG tool ID number consisting of the letters "AMTR" and a number will mark tools used for temporary issue by the PSC; main tool room tools will be identified with an "AMMM" marking and a number.

10.11.8.1. (Added) Tool Kit Issue. Hill AFB Form 515, *Tool Request/ Turn In*, is signed by the first-level supervisor and coordinated through the group TCM. It will be used to order TKs from 309 MXW tool crib/PSC. The group TCM or alternate will submit a work order request electronically in the FEM system to tool crib/PSC with a reasonable need date. All information, including the TK type number (template) and the appropriate supervisor's signature (first-level may sign for ITKs, second-level must sign for CTKs), must be provided.

10.11.8.1.2. (Added) An appointment must be made with tool crib/PSC prior to TK turn-in. During TK issue both the issuing tool attendant and the receiving mechanic/technician will verify each tool listed on the TKCRL for accuracy of tools issued and proper TK marking. When ITKs are turned-in, the tool room attendant and employee will inventory the kit for accuracy of tools returned and proper TK marking. After this has been accomplished, tool attendant and relinquishing mechanic/technician will sign Hill AFB Form 515. A copy will be provided to the relinquishing mechanic/technician for their TK turn-in receipt. Supervisors will ensure employees read and return the signed original AFMC Form 311 to the tool crib/PSC tool crib, prior to receiving a tool issue. Tool crib/PSC will retain the original (master) copy of the Hill AFB Form 515, the AFMC Form 311, and the TKCRL signed by the employee and maintained by the tool crib, and will be the only auditable copy.

10.11.8.2. (Added) An employee detailed to another job may be issued a temporary TK. This temporary issue TK will be signed for and assigned a return date that parallels completion of the detail. Employees will not have more than one permanently assigned ITK in their possession at any time, unless authorized by the center TCM. Supervisors may request an additional TK for employees who do multi-skill work, perform work in geographically separated areas, etc. The request must be in writing stating the employee's name, phone, official symbol, current TK ID number and justification for the additional TK. The request must be coordinated through the group TCM to the center TCM.

10.11.8.3. (Added) When an employee is permanently reassigned to a new RCC or moves from his/her current job assignment, the ITK will be turned into the tool center. Once the kit has been received into the tool center and all tools have been accounted for, the TK may be transferred or issued to another employee or the losing supervisor. Since the employee issued tool card is used to track tools, equipment, and funds associated with the employees group, the tool card needs to be tracked and when lost will be controlled IAW AFI 21-101, AFMC Sup 1, paragraph

10.9.1.5.1.

10.11.8.4. (Added) CTKs will be inventoried and transferred from supervisor to supervisor as needed. If a supervisor is not available or being replaced, the CTK must be transferred to the second-level supervisor or turned into the tool crib.

10.11.8.5. (Added) 309 AMARG. TK Issue and Turn-in Hill AFB Form 515, *Tool Request/Turn In*, is signed by the first-level supervisor and coordinated through the group TCM and will be used to order TKs from the 309 AMARG Tool Crib. During TK issue both the issuing tool attendant and the receiving mechanic/technician will verify each tool listed on the TKCRL for accuracy of tools issued and proper TK marking. An AF Form 2005, *Issue/Turn-In Request*, will be used to annotate shortages. When ITKs are turned-in, the tool room attendant and employee will inventory the kit for accuracy of tools returned and proper TK marking. After this has been accomplished, tool attendant and relinquishing mechanic/technician will sign Hill AFB Form 515. A copy will be provided to the relinquishing mechanic/technician for their TK turn-in receipt.

10.11.8.5.1. (Added) Tools turned in serviceable (other than temporary issue tools) will be turned-in to the main tool room.

10.11.8.5.2. (Added) Tools turned-in unserviceable. These tools will be turned-in to the main tool room. The ID number will be removed and the tool exchanged for a replacement under the Warranty Tool Program.

10.11.9.1. (Added) Replacement. A limited stock of replacement tools will be maintained by 309 MXSS/MXDVAC. The 309 MXSS/MXDVAUB supervisor will ensure quantities and types of tools in stock are not excessive and/or co-mingled. Tool bin labels will include NSN or part number, unit of issue, item description, and bin levels. Stock levels may be adjusted in support of special projects, special operating requirements, or if existing demand data is insufficient to support mission requirements. A single occurrence of a mission limiting status is not a sufficient reason to establish an adjusted stock level but may be an indicator to review demand data for accuracy. Up to a 90-day level of items that are subject to wear and breakage may be maintained to replace unserviceable items. When bin levels drop below 50 percent, new stock will be ordered. Tool crib/PSC will stock standard size (e.g. 3/16", 1/4", 5/16") drill bits and a nominal amount of standard size machine and hand reamers under 1" diameter. End mills, counter bores and reamers etc. that are task or weapon system specific will be considered shop machinery accessories/attachments and will be furnished and controlled by the product group.

10.11.9.1.1. (Added) Tools that require replacement or repair will be turned in to 309 MXW Tool Crib/PSC. If the tool is sent for replacement/repair the TK owner will be given a receipt generated by the FEM Tool Management Program. The receipt will be kept in the TK until the tool is returned. If a replacement/repair tool must be back ordered, a HAFB Form 529, *Hand Tool Back Order Receipt*, or FEMS generated receipt, will be given to the individual which will be kept in the TK until replacement is received. All replaced tools, except those too small or impractical, will be marked prior to replacement issue.

10.11.9.2. (Added) Warranty Tools. Tool crib/PSC tool issue centers will maintain an active warranty tool program. The purpose of the warranty tool program is to save money and ensure high quality, industrial strength warranted tools are available for use in maintenance activities. Warranty tools are obtained through the GSA program or local contracts with warranty tool vendors. No attempt to repair and/or modify any warranty tool will be made by either users or program managers.

10.11.9.3. (Added) 309 AMARG Replacement Tools. Tools stored in the tool issue center will be used to replace worn or broken tools. Only tools listed on the TKCRL may be replaced on a one-for-one basis. The ID number must be verified and marked on the replacement tool at the time of issue. If a broken tool requires replacement, all parts must be turned-in. If a replacement tool does not meet the above criteria, verification that missing tool procedures (AFMC Form 310) were accomplished, must be made before reissue. If a replacement tool is backordered, evidence of backorder status must be provided to the person responsible for the tool. A copy of AF Form 2005 will be given to the person responsible for the tool as evidence of the tool requisition. The copy of the AF Form 2005 will be kept in the envelope/folder with the TKCRL.

10.11.9.4. (Added) 309 AMXG tools that become broken or worn will be exchanged on a one-for-one basis, at the earliest convenience. Only tools issued by tool crib/PSC may be exchanged. If tool crib/PSC does not have the required tool available for exchange, a Hill AFB Form 529, (or FEMS generated equivalent), will be issued and kept in the TK until the tool can be provided.

10.11.9.4.1. (Added) If a tool is not obviously broken but fails to function as designed, the following information will be submitted on a DD Form 1577, *Unserviceable (Condemned) Tag-Materiel*: Federal stock number, part number, item description, unit of issue, quantity, remarks, name stamp, and date. A first-level supervisor or their designated representative (alternate) is

authorized to determine the condition of the unserviceable tool and sign or P- stamp the DD Form 1577.

10.11.10.2.1. (Added) Supplemental items will be turned-in to the issuing PSC or current supervisor. Inventory and lost tool procedures will apply to supplemental items.

10.11.11.1. (Added) Cleco Control Procedures. Cleco and wedge lock fasteners are considered tool items and will be marked with the TK ID number, controlled, and subject to inventory and lost tool procedures. Clecos and wedge locks will be shadowed in the TK either individually, in containers, or on trays. Containers or trays will be controlled IAW AFI 21-101 AFMC_Sup 1 paragraph **10.11.3.6.3**.

10.11.11.1.1. (Added) 309 AMARG Cleco Control Procedures. Clecos not included in ITK/CTK will be loaned 10 at a time and placed in a metal tray for easy control. Clecos in ITK/CTK can be placed in metal tray or shadowed. If Cleco must remain on the aircraft for multiple shifts, this will be documented in the aircraft records and the appropriate WCD. Documentation will include when, where, and the quantity of items left attached and the reason (i.e., 12 Clecos 9 Apr 04 on aircraft tail number XX XXXX to hold panel until drilling is complete). Documentation for clearing the WCD annotation will be a single line through the annotation, and an additional annotation stating "Removed at" time and date and M-stamped.

10.11.11.1.2. (Added) Cleco, clamp, and fixture requirements are as follows: If a Cleco, clamp, fixture or tool involved in the repair and or overhaul process must remain on the aircraft or component for multiple shifts, it will be documented in ink on the front page of the applicable WCD or applicable block on aircraft AFTO Forms 781A. Documentation will include TK ID number, time and date used, location where used on aircraft or component, and the quantity of Clecos, clamps, fixtures or tools left attached. If a definitized sheet is attached to the WCD, the associated sub operation number will also be annotated (e.g., "Installed 17 5/16" Clecos and 5 clamps from TK HBO325 in panel 1604 at 15:25, 15 June 2005, Sub Op number 00040). Documentation for clearing the WCD annotation will be a single line through the annotation, and an additional annotation stating "Removed at" time and date and M-stamped.

10.11.11.1.2.1. (Added). When Clecos or clamps are checked out of a CTK, they can either be checked out as a tray or individually, but when left on an aircraft or component, the tray will be signed back in and the individual amount left on the aircraft or component will be re-signed out.

10.11.11.1.2.2. (Added) When annotating the CTK check-out log, the aircraft dock or component station will be listed.

10.11.15.1. (Added) Shop machinery accessories/attachments and/or end items used to adjust/operate equipment will not be listed on the TKCRL or controlled by 309 MXSS/MXDVAC. First time issues, initial purchase or replacement of shop machinery accessories/attachments must be justified on a Hill AFB Form 515, *Tool Request* and authorized by the second-level supervisor. These items will be exchanged on a one-for-one basis.

10.11.15.2. (Added) As a minimum, shop machinery accessories and attachments storage cabinets/drawers will be marked to identify the contents. Shop machinery accessories/attachments and/or end items used to adjust or operate equipment that is used for TDY support shall be marked (laser, etching or permanent marker) with "HILL AFB Bldg # and office symbol. Items that cannot be marked by laser, etching or permanent marker will be identified with a metal tag lazered or etched with HILL AFB Bldg # and office symbol and

secured to item in a way that it is not easily removed. Shop machinery accessories/attachments and or end items used to adjust or operate equipment when used to support a TDY, will have an AF Form 1297, initiated with a description of all items issued along with an AFMC Form 309. The AFMC Form 309 will be annotated at the end of shift inventory each day the items are used during the TDY.

10.11.15.3. (Added) 309 AMARG Shop Machinery Accessories and Attachments. These will be stored and controlled IAW AFI 21-101_AFCM_ SUP 1, paragraph **10.11.15**.

10.11.15.4. (Added) 309 CMXG common hand tools issued as accessories will be marked with the Preventive Maintenance (PM) number assigned to the host machine.

10.11.16.1. (Added) All requests for tools for TDY will be forwarded to tool crib/PSC using a Hill AFB Form 515. The request will include the approximate duration of the TDY. TDY TKs may be prepared on an as needed basis and will be issued prior to the TDY. TDY personnel will be responsible for ensuring that the TKs are complete and properly marked before departure. Team chiefs will perform the supervisor's duties concerning TK inventory while TDY. TDY TKs are subject to all controls, inventories, and lost tool procedures defined herein. Upon completion of the TDY, TDY TKs will be immediately returned to tool crib/PSC and a complete inventory will be concurrently performed by the tool crib/PSC attendant and person assigned to the TK. Lost tool procedures will be performed IAW this supplement and the governing regulations at the TDY site. Copies of the lost tool report documentation will be furnished to tool crib/PSC and the group TCM upon completion of the TDY.

10.11.16.2. (Added) 309 AMARG TDY and Depot Field Team (DFT) TKs. The accountable or sponsoring RCC supervisor will ensure TDY personnel are briefed on the contents of this instruction.

10.11.16.2.1. (Added) TDY personnel and DFT members working at 309 AMARG will comply with this instruction, in addition to the tool control and accountability program of their home station.

10.11.16.2.2. (Added) The team chief or responsible person will perform a TK inventory upon arrival at the TDY site, before commencing and after completing each assigned task, and before departing the TDY site.

10.11.16.2.3. (Added) If a tool is lost while performing duty at a TDY site, local missing tool procedures will be initiated per paragraph 10.11.16.2.4.

10.11.16.2.4. (Added) An AFMC Form 310 will be completed when a **309** AMARG tool is lost. Three copies of the completed AFMC Form 310 will be forwarded to the appropriate director for signature and distribution. Copy 1 will be sent to the 309 AMARG Quality Assurance Office (309 AMARG/QA), copy 2 will be mailed to the Quality Assurance Office of the person who lost the tool and copy 3 will be given to the person who lost the tool.

10.11.16.3. (Added) Tools used to support TDY, if taken from an existing CTK or ITK, will have an AF Form 1297 documenting, tool NSN, nomenclature and quantity of tools. AF Form 1297 will be present with tools to serve as a TKCRL. A copy will be left in the existing kit to ensure accurate inspection and inventory records are maintained. All copies will be signed by employee, supervisor and TCM and a line will be drawn through the unused portion of the list. If TMDE is included in the tools taken TDY, a copy of the 1297 will be given to the PME

monitor for their records. All inventories of such tools will require the AFMC form 309 for daily and quarterly inventories.

10.11.18.1. (Added) Locally Manufactured or Developed/Modified Tools. Product groups will be responsible to approve and control special tools and locally manufactured/modified tools (tools that have been made or modified for a specific job function). These tools, when kept in a CTK, will be marked with the TK ID number, shadowed, and will be identified on the supplemental tool list. They will not be added to an ITK unless authorized by the supervisor. If the tool is not kept in a CTK, it will be maintained by tool crib/PSC or PSC for temporary issue, and will be marked with the PSC ID number. Locally manufactured/modified tools are subject to the same inventory and lost tool reporting procedures as TKCRL items. The Engineering Office will track locally manufactured tools to ensure biennial reviews are accomplished.

10.11.18.2. (Added) When procuring tools to be modified, a Hill AFB Form 515 must be completed by the requestor, describing the tool to be modified, reason for the modification, and intended use. The form must then be signed by the supervisor prior to being taken to the 309 MXW tool crib/PSC. The supervisor will take the procured tool to engineering for modification.

10.11.18.3. (Added) Locally Manufactured/Modified Tools (LM/MT) will be controlled. Approved and authorized LM/MT may be in a TK but must be listed on the supplemental list. LM/MT will be marked with the tool kit number, shadowed and identified on the supplemental list.

10.11.18.3.1. (Added) Tools listed and issued on a TK will not be modified. Dressing or sharpening of chisels, putty knives, punches, or knives does not constitute a modification.

10.11.18.4. (Added) Initiator will review the LM/MT with their first-level supervisor for design and feasibility. If the supervisor concurs with design and feasibility the initiator will obtain a local LM/MT worksheet.

10.11.18.5. (Added) Request for approval or LM/MT must be routed through the Planning/Engineering office. Request for approval must include the approval worksheet (Hill AFB Form 515), a description of the item and its intended use, a list of materials required, cost, procedures for manufacturing/modifying the tool and location where tools will be kept. Tools/equipment identified and approved for construction in a formal DoD TO are considered pre-approved and do not require approval. These tools will list the TO number on the supplemental list.

10.11.18.6. (Added) The initiator will submit the LM/MT worksheet to the appropriate system planner. The system planner will review LM/MT worksheet (Hill AFB Form 515) to ensure a design does not already exist in applicable technical data.

10.11.18.7. (Added) The system planner will approve or disapprove the LM/MT worksheet and forward to the engineering office with all supporting documentation.

10.11.18.8. (Added) Engineering office will review all information and coordinate with initiator when additional information is required. Evaluate request with system planner for benefit to production process. Evaluate request for safety and for design integrity factors.

10.11.18.9. (Added) The engineering office will request manufacture or modification of tool and any raw materials required. Engineering office will forward all required items to the applicable back shop for manufacture or modification and include all necessary supporting data.

10.11.18.10. (Added) Engineering office will receive and inspect modified/manufactured tool from back shop. Determine the need for process order or TO changes and coordinate with the systems planner and SPO to implement change.

10.11.18.11. (Added) The engineering office will issue the approved LM/MT to the initiators supervisor.

10.11.18.12. (Added) The supervisors will ensure the tool is marked with the appropriate TK identification number, shadowed and listed on the supplemental list and include design tracking number on the supplemental list.

10.11.18.13. (Added) On approved LM/MT tool the engineering office will design a tracking number and annotate LM/MT worksheet.

10.11.18.14. (Added) The engineering office will maintain a database of approved worksheets on all approved LM/MT tools to track design numbers and biennial reviews. The databases will be available for review by management and quality assurance.

10.11.19. (Added) 309 AMARG Locally Manufactured or Developed/Modified Tools. Requests to locally manufacture tools will be submitted to the lead planner of the requesting division.

10.11.19.1. (Added) The 309 AMARG lead planner will in turn:

10.11.19.2. (Added) Obtain, evaluate and retain the technical data, drawing, or special requirements that necessitate the tool's use.

10.11.19.3. (Added) Get approval from the 309 AMARG Mission Design Series (MDS) engineering, prior to use, if the tool is outside of local engineering/planning expertise.

10.11.19.4. (Added) Upon approval, the 309 AMARG planners assigned to the squadrons will coordinate with the necessary production area to manufacture the tool.

10.11.19.5. (Added) After a 309 AMARG tool has been manufactured, the tool will be forwarded to the TCM for storage or issue to the applicable shop for incorporation in their CTK or in-shop process.

10.11.19.6. (Added) All approved 309 AMARG locally manufactured tools controlled by the tool issue center will be loaded into FEM System. The tool ID field will reflect the approval authority (i.e., TO references and/or engineering approval references).

10.11.20. (Added) 309 CMXG LM/MTs will be marked with the assigned drawing number ("X" number), unique tool listing (UTL) number or cabinet/Vidmar/box number etc. for that tool. If a LM/MT is kept in an ITK, CTK or DTK, etc., it will also be marked with the tool kit ID number, shadowed and identified on the supplemental list. Cabinets/Vvdmar etc., (other than assigned & issued tool kits) used to store LM/MTs will be marked on the outside of the Cabinets/vidmar etc., with the RCC office symbol, and an assigned RCC number (i.e., 1, 2, 3 depending on the number of such cabinets/vidmars etc., within the RCC). All inventories of such tools will require an inventory listing and the AFMC Form 309 for daily and 90-day inspections. All LM/MT tools in use will be checked out using assigned shop chits or a tool sign out list. All tool control reporting procedures will apply. The engineering office will maintain copies of documentation/records for all approved locally developed/modified tools and equipment to include drawings and/or photos. Approvals will be reviewed every 2 years and the

review will be annotated in the engineering LM/MT and UTL data base. LM/MTs will not be added to a tool kit unless authorized by the supervisor and engineering. The group TCM will be notified when LM/MT tools are added/deleted to tool kits. Hill AFB Form 515 will be used to requisition tools from the tool crib that are to be modified.

10.11.20.1. (Added) All locally manufactured lifting devices will be load tested and certified. Quality Assurance will verify proper load test and documentation have been accomplished prior to being put into service.

10.11.20.2. (Added) All LM/MT as of the date of this publication will have an approved AF drawing prior to being manufactured. All approved drawings are the property of the USAF. A copy of all approved drawings will be kept in a central repository IAW AFI 21-401, *Engineering Data Storage, Distribution and Control*, and AFI 21-402, *Engineering Drawing System*.

10.11.20.3. (Added) All LM/MT that do not have an assigned drawing/part number and are currently in use will be assigned a UTL number by engineering. All tools requiring a UTL number will be photographed, documented, and recorded in a data base. The engineering flight within each 309 CMXG squadron will be responsible for the numbering, documentation, and data base of the tools within their control. The purpose of the UTL number is to account for all LM/MT that are in use with no traceable documentation. No new UTL number will be assigned after 2008. If a tool marked with a UTL number needs to be rebuilt, replaced, added to a TO, or any other scenario that would normally require a drawing, a drawing will be accomplished through standardized procedures for local manufacture tools. A new local manufacture drawing number will be assigned, and the tool will be removed from the UTL data base.

10.11.21. (Added) For locally manufactured test aids, fixtures, etc., not approved by a TO, engineering approval must be obtained. The approval will consist of an AFMC Form 561, *Process Order*, as the technical reference and be IAW paragraph **10.11.18.** (AFMC).

10.11.22. (Added) 309 EMXG cabinets/vidmar used to store LM/MT and equipment will be marked with a unique numbering system to identify the work area. Example: GP-115 (GP for ground power, 115 is the number assigned to that cabinet/vidmar). Each drawer will be assigned a number, and each tool will be etched with the unique cabinet number. Unique numbering of a cabinet/vidmar will be approved by supervision to avoid duplication. LM/MT equipment will be shadowed, silhouetted, or outlined in each drawer or shelf and given a location number. All tools will be listed on the AF Form 3126 or AF Form 3136 with the cabinet/vidmar number, drawer number, noun, and description. Drawers/shelves will be marked to identify contents as "Locally Manufactured/Modified Tools".

10.12.2.1.1.1. (Added) DTKs when used will be assigned to the supervisor as with CTKs. DTKs may be temporarily assigned to an employee by the supervisor for use at the jobsite by the work crew. Tools removed from the DTK are not required to be signed out or chitted, the individual who signed out the tool kit will be responsible for the tools. End-of-task inventories must be performed to ensure tool accountability.

10.12.2.1.1.2. (Added) 309 EMXG CTKs used by only one person, i.e., in a lean cell. An employee may sign out the entire tool kit using an AF Form 1297 which will be kept on file by the supervisor. The individual may have the CTK issued to them for a maximum of 90 days in which procedures IAW AFMCI paragraph **10.12.2.1.** apply. Should the CTK be required by the employee beyond the specified time frame, the employee will renew the loan by accomplishing a

new AF Form 1297. Should another employee(s) require the use of tools from that CTK, the tools must be signed for on an AF Form 3126, or AF Form 3136, *General Purpose Tool Checkout Document*, AFMC Form 62, *CTK Inventory and Control Log*, or a chit system. Information on the checkout document must contain CTK number, tool nomenclature, date, shift, location, initials and/or M-stamp.

10.12.2.3.1. (Added) Since the supervisor is ultimately responsible for TKs under his/her control the supervisor or designated representative (a non BU employee) will sign page 4 of AFMC Form 309 verifying the required 365-day inspection has been properly completed. This may include TKs assigned directly to the supervisor. Previous AFMC Forms 309 will be stored/filed for a 365-day period or until a supervisor review has been accomplished on the current AFMC Form 309.

10.12.2.3.2. (Added) Responsibility. Military and civilian personnel will be held financially liable for the loss, damage or destruction of government property issued to them when caused by their gross negligence, willful misconduct, or deliberate unauthorized use. The terms “damage” or “destruction” do not include wear and tear resulting from normal use. The immediate supervisor must initiate action, as specified by AFI 23-111, and AFMAN 23-220, *Reports of Survey (ROS) for Air Force Property*, for all tools issued which cannot be turned-in due to loss or are returned to tool crib/PSC damaged or destroyed. This includes all temporary loaned and TK issued tools.

10.12.2.3.3. (Added) 309 AMARG supervisors will conduct a random inventory of ITKs, CTKs, and tools temporarily issued, to include condition and proper ID numbers. The tool kits must be inspected at least once every 90 days. Completed inventories will be documented on the individual's AFMC Form 309. When the form is full the supervisory block “Signature” on the AFMC Form 309 is transferable to a new replacement card by printing in the name of the supervisor thus relieving the supervisor of the responsibility of re-accomplishing the ITK/CTK inspection every time the card is swapped out before the 90-day inspection requirement.

NOTE: (Added) Descriptions and quantity of tools issued temporarily can be obtained from the servicing tool issue center or the tool kit custodian.

10.12.2.3.3.1. (Added) Indicate a 90-day inspection has been conducted by entering the following on page four of the AFMC Form 309.

10.12.2.3.3.2. (Added) Current date (yyyymmdd).

10.12.2.3.3.3. (Added) Supervisor's signature and remarks.

10.12.2.3.3.4. (Added) If a 309 AMARG tool or part of a tool is missing, implement lost tool procedures and make appropriate entries in the lost tool documentation portion of page four. Identify:

10.12.2.3.3.5. (Added) Date 309 AMARG tool was lost (yyyymmdd).

10.12.2.3.3.6. (Added) Report Number: Control number assigned to AFMC Form 310.

10.12.2.3.3.7. (Added) Nomenclature of 309 AMARG missing tool.

10.12.2.3.3.8. (Added) Daily Inspections. Tool kit owners will inventory tools taken to the job site as follows:

10.12.2.3.3.8.1. (Added) Tools will be inventoried and accounted for prior to personnel departing from the work site, at the end of the shift, before engine runs, and aircraft launches. AFMC Form 309 will be annotated at each location prior to leaving the work site by documenting the end-of-job or end-of-shift inspection in the appropriate blocks.

10.12.2.3.3.8.2. (Added) Implement the 309 AMARG lost tool procedure when a tool or part of a tool is missing.

10.12.2.3.3.9. (Added) When 309 AMARG personnel in the RCC withdraw tools from CTKs or, in some cases, the entire CTK, a chit or hand-receipt identifying that individual's (temporary custodian) TK number will be left to show each tool or CTK removed. When a CTK is returned, the temporary custodian will ensure proper inventory of the CTK has been accomplished and annotated on AFMC Form 309 at the end of the shift.

NOTE: (Added) Inventory of 309 AMARG CTKs and tool kits that are utilized in shop areas will be documented on page one of AFMC Form 309.

10.12.2.3.3.10. (Added) 309 AMARG Tool kit problems, such as worn or broken tools, deteriorated foam inserts, etc., will be reported to the immediate supervisor.

10.12.2.4.1. (Added) Biennial Review. The biennial tool kit type (template) review will be documented on Hill AFB Form 516, and forwarded to the group TCM. The group TCM will forward any required template changes to tool crib/PSC so the template may be updated. Issued TKs will be reconfigured to meet new template requirements if the template is revised. TK composition should be the same for all employees possessing the same skill who are working in the same RCC. The group TCM will review, document, and forward the biennial reviews to the center tool manager within 14 days of completion of the review.

10.12.2.4.2. (Added) 309 AMXG biennial tool template review coordination will be conducted by the 309 AMXG TCM. The 309 AMXG TCM will develop a database to list tool templates in 309 AMXG and track the annual tool template reviews on that database. The database will contain the template number, type of kit, aircraft type, kit name, file number (consisting of aircraft type and sequence number), appropriate squadron-level contact, template status, RCC, phone number, and last date of review.

10.12.2.4.2.1. (Added) 309 AMXG TCM will provide a copy of the tool template and a Hill AFB Form 516. The 309 AMXG TCM will group templates by skill and distribute them to second-level supervisors. The tool template and signed Hill AFB Form 516 will be returned to the 309 AMXG TCM no later than 20 workdays after receipt from the TCM. ITK eliminations will be IAW Art. 33.

10.12.2.4.2.2. (Added) The second-level 309 AMXG supervisors will task appropriate supervisory personnel and production personnel to review the tool template and make changes. This will include eliminating excess, duplicate, and infrequently used tools, and adding any additional items needed to enhance production. Any deletions will be made directly on the supplied tool template by highlighting deleted items. Any added items will be listed on a supplemental list, AF Form 3136 or Hill AFB Form 515, along with the National Stock Number, nomenclature, and quantity. The AF Form 3136, a continuation sheet or Hill AFB Form 515 will be stapled to the Hill AFB Form 516 and tool template.

10.12.2.4.2.3. (Added) The 309 AMXG assigned appropriate supervisory personnel will return the completed template reviews to the second-level supervisors for final review. If the second-

level supervisors concur, templates will be returned to the 309 AMXG TCM. If not, a new suspense will be established and returned to the appropriate supervisory personnel for a second review.

10.12.2.4.2.4. (Added) The 309 AMXG TCM will make two copies of the completed reviews. The original tool template review will go to tool crib/PSC to implement the changes to the appropriate tool template. A copy will be kept in a file by the 309 AMXG TCM until the next review is complete. The tool template reviews will be filed in the 309 AMXG/QP files.

10.12.2.4.2.5. (Added) The 309 AMXG TCM will establish a schedule for review of tool templates so that all templates are completed biennially. The 309 AMXG TCM will also update the tool template database with the tool template review complete date so that the next template review can be scheduled before the next tool template review due date.

10.12.2.4.3. (Added) 309 MMXG Biennial Tool Template Review: The biennial tool template review will be coordinated with the 309 MMXG TCM. The 309 MMXG TCM will print a copy of the tool template and attach a Hill AFB Form 516. The 309 MMXG TCM will group templates by owning sections and distribute them to second-level supervisors. The tool templates and signed Hill AFB Form 516 will be returned to the 309 MMXG TCM no later than 20 workdays after receipt from the TCM. The Hill AFB Form 516 will be forwarded to 309 MXSS/MXDVACB to make requested changes. The 309 MMXG TCM will monitor to ensure all request are completed and accurate.

10.12.3.1. (Added) Long Term Storage. Each group will establish secure areas for TK storage and designate the types of TKs to be stored. Any designated TK that will not be used for 25 days will be secured in this storage area and meet all guidelines IAW AFI 21-101 AFMC SUP 1, paragraph **10.12.3**. Commanders and supervisors of all activities owning and using TMDE requiring calibration are responsible to ensure this TMDE is not used unless it has been calibrated and shall be removed from service and returned to PMEL for recertification once the calibration due date has expired.

10.12.3.1.1. (Added) 309 AMARG Long Term Storage Kits. 309 AMARG has no long-term storage TK but has long term storage of tools on equipment accounts for both Air Force and Navy.

10.12.3.1.2. (Added) 309 MMXG Long Term Storage of TK. Any TK not required for the performance of assigned duties for more than 25 calendar days, will be inventoried by the TK owner or supervisor before being secured and stored for extended periods. While in storage, these kits will be inspected every 18 months for inventory content and corrosion prevention. Use AFMC Form 309 to document the inventory. The TK will be in a controlled, secure area. The designated list of long term storage areas are listed and on file at the 309 MMXG TCM desk.

10.12.4.8. (Added) Lost Tools. Tools identified as missing from a TK, tool cribs or a production support center will be reported immediately to the supervisor when determined to be missing. A lost tool report will be initiated on an AFMC Form 310 and page 4 of AFMC Form 309 will be documented. When a tool is lost, the tool owner will document the loss on page 4 of AFMC Form 309. The immediate supervisor of the employee who lost the tool will contact the group TCM to initiate a lost tool package to include, as a minimum, an AFMC Form 310. The immediate supervisor will complete the lost tool package/AFMC Form 310. The supervisor will ensure AFMC Form 310 block 17a is signed by the first level supervisor, 17b signed by the

second level supervisor and 17c is signed by the group TCM. Block 18 will be signed by the group commander or group director. The group TCM will ensure the lost tool package/AFMC Form 310 is complete and has been properly coordinated. Responsibility rests with group supervision to determine if tools were lost due to suspected gross negligence.

10.12.4.8.1. (Added) The person was issued the tool/item must search the immediate work area for the missing tool/item and immediately report it to their supervisor. In the event the tool is not found during the initial search, the first-line supervisor must contact the group TCM within 2 hours of the suspected loss. The supervisor must conduct a search of the areas, including inside equipment, where the tool may have been used. The following minimum information must be provided to the group TCM:

10.12.4.8.1.1. (Added) Name and office symbol of the accountable individual, nomenclature, TK ID number and when and where the tool was lost.

10.12.4.8.1.2. (Added) If a tool is lost across groups or in an area not usually assigned to the TK owner then the immediate supervisor or alternate supervisor, of that area, must be notified. This will make supervisors aware of a lost tool in their area of responsibility so appropriate lost tool procedures may be taken.

10.12.4.8.2. (Added) Once the information is provided, the group TCM will issue a lost tool sequential control number which will be annotated in block 1 of AFMC Form 310. Lost tool control numbers will consist of the first four letters of the group initiating the lost tool report, followed by the last two digits of the year, the three-digit Julian date, and a sequential two-digit number starting with 01 and ascending up to 99 (e.g., “SMXG-02-342-01” or “CMXG-03-003-02”).

10.12.4.8.2.1. (Added) The supervisor will ensure AFMC Form 310 block 17a is signed by the first level supervisor, 17b signed by the second level supervisor and 17c is signed by the group tool control manager. Block 18 will be signed by the group commander or group director. The lost tool/item package/AFMC Form 310 will have a 5-workday suspense back to the group tool control manager once it is issued. The group tool control manager will ensure the lost tool/item package/AFMC Form 310 is complete and has been properly coordinated.

10.12.4.8.2.2. (Added) A Report of Survey (ROS) is always required when the estimated replacement cost for hand tools is over \$100.00 per unit or a total cost of over \$500.00 whether or not any gross negligence is evident or suspected. In every case, a copy of the AFMC Form 310 will be taken by the tool owner to issuing tool room, 309 MXSS/MXDVAC, to be maintained in the master TK file. The group tool manager will maintain a copy of the AFMC Form 310, and copies will be forwarded to the employee, the TK owner’s supervisor, and the center tool program manager.

10.12.4.9. (Added) A tool that is found will be reported to the group TCM within 2 hours. Tools found prior to completion of the lost tool reporting process will be returned to the TK owner. The appropriate product group TCM is responsible for annotating the recovery action on AFMC Form 310, blocks 16A and 16B. Once documented, a completed copy of AFMC Form 310 will be forwarded to tool crib/PSC to be maintained in the master TK file and copies will be forwarded to the TK owner, TK owner’s supervisor and the center TCM. Tools that are found after the lost tool investigation and reporting process have been completed will be returned to tool crib/PSC by the product group TCM if a replacement tool has been already issued. The

product group TCM is responsible to annotate the AFMC Form 310, blocks 16A and 16B, to document tool recovery. Once documented, copies of the AFMC Form 310 will be forwarded to the TK owner, TK owner's supervisor and the center TCM. Recovered tools returned to tool crib/PSC will be either de-marked and returned to stock if serviceable, or properly disposed of if unserviceable.

10.12.4.10. (Added) Each group will develop grounding/impoundment and/or release procedures as applicable for aircraft, engines, missiles, support equipment, AGE and end items or components.

10.12.4.11. (Added): On a monthly basis each group will ensure all copies of lost tool reports, AFMC Form 310, have been forwarded to the center TCM for input into the tracking of lost tool/item metrics.

10.12.4.12. (Added) Each AFMC Form 310 needs to provide the following information: date tool/item lost, cost of each tool/item, and/or date time tool/item found. Blocks 17a, 17b and 18 are signed by the appropriate personnel. This information will be collected by the center TCM to track required metrics.

10.12.4.13. (Added) 309 AMARG Lost Tool Procedures.

10.12.4.13.1. (Added) Quality Assurance (309 AMARG/QPQ) will:

10.12.4.13.1.1. (Added) Assume the 309 AMARG responsibilities of the lost tool control monitor (LTCM).

10.12.4.13.1.2. (Added) 309 AMARG establish and maintain a 309 AMARG lost tool control log that lists pertinent information (i.e., lost-on-aircraft (LOA)/not lost on aircraft (NLOA), type lost tool, was tool found, etc.).

10.12.4.13.1.3. (Added) Assign 309 AMARG report control numbers for lost tools.

10.12.4.13.1.4. (Added) Affix a locally devised 309 AMARG routing sheet to the AFMC Form 310 with dates to ensure timely routing of the report.

10.12.4.13.1.5. (Added) Submit an 309 AMARG quarterly report to the directors of all lost tool activities and tool spot checks.

10.12.4.13.2. (Added) When an 309 AMARG tool is lost:

10.12.4.13.2.1. (Added) The 309 AMARG employee will immediately conduct a search.

10.12.4.13.2.2. (Added) If the 309 AMARG tool cannot be found within 15 minutes, the employee will report the incident to the immediate supervisor.

10.12.4.13.3. (Added) 309 AMARG immediate supervisors will:

10.12.4.13.3.1. (Added) When informed of a 309 AMARG missing tool, begin a thorough search of the suspected areas or weapons system where the tool was lost. If after searching for 2 hours, the tool is not found, notify the LTCM and initiate an AFMC Form 310.

10.12.4.13.3.2. (Added) When a 309 AMARG tool is determined to be missing during flight or functional check flight preparation, all work will be stopped and an entry will be made in the AFMC Form 959, *Work Control Document*. If an AFTO Form 781A, *Maintenance Discrepancy and Work Document*, is being used, a red "X" will be entered in the symbol block. The LTCM

will impound the weapons system IAW Chapter 9B and notify the Resource Management Division, 309 AMARG squadron directors, and Job Control.

10.12.4.13.3.3. (Added) Obtain essential data to identify 309 AMARG areas to be searched and document them on the AFMC Form 310, block 12. Personnel inspecting the areas will indicate the areas searched by initialing the entry in block 12 and signatures will be entered in block 15. The employee's AFMC Form 309 will be annotated to show the time the tool was reported missing.

10.12.4.13.3.4. (Added) Continue the search until the 309 AMARG tool is found or until discontinued by the director or his/her designated representative. If a lost-on-aircraft search is required, notify 309 AMARG/QPQ, 309 AMARG Job Control, and the appropriate divisions that a tool has been reported lost on a weapons system. Provide the type, model, serial number, and location of the weapons system.

10.12.4.13.4. (Added) If the 309 AMARG tool is found, notify LTCM. Complete the AFMC Form 310 by inserting a statement in block 8 stating that the tool was found and check block 16. Once the form is completed forward it to LTCM.

10.12.4.13.4.1. (Added) If the 309 AMARG tool is not found, complete the AFMC Form 310 and forward the report to the 309 AMARG LTCM who will attach a transmittal sheet and forward it to the appropriate action agencies.

10.12.4.13.4.2. (Added) After the 309 AMARG transmittal sheet is returned for filing, the 309 AMARG LTCM will make copies and distribute them as follows:

10.12.4.13.4.2.1. (Added) Original copy to the 309 AMARG Aircraft Records Section, 309 AMARG/QPQL, to be placed in the aircraft records.

10.12.4.13.4.2.2. (Added) 309 AMARG. one copy to 309 SPTA/MXDUA for filing.

10.12.4.13.4.2.3. (Added) One copy to the 309 AMARG LTCM for filing.

10.12.4.13.4.2.4. (Added) The 309 AMARG lost tool report will be retained by 309 SPTS/MXDUA for a minimum of 2 years.

10.12.4.13.5. (Added) 309 AMARG. 309 AMARG/QPQ will comply with Chapter 10B.

10.12.4.13.6. (Added) 309 AMARG Conditions for Discontinuance of Search.

10.12.4.13.6.1. (Added) The supervisor must ensure that the use of x-ray, bore scope (when available), mirror inspection procedures, state-of-the-art procedures and techniques to include component disassembly have been considered. Necessary equipment to do the inspections is located in 309 SPTS/MXDUA, Tool Issue Center, and 577 CMRS/MXDPA, Non-Destructive Inspection Branch.

10.12.4.13.6.2. (Added) The supervisor will determine the procedures and techniques to be used when a tool cannot be found or is located in an inaccessible area before requesting termination of the search.

10.12.4.13.6.3. (Added) Request to terminate search can be submitted to the director when all visible means of examination have been exhausted. Discontinue search/release end item on block 18 upon receiving authorization from the director or his/her designated representative.

10.12.4.13.6.4. (Added) When the tool is found, discontinue the search and advise all personnel involved in the search.

10.12.4.13.6.5. (Added) Tools Found. An AFMC Form 310 will be completed for all tools found which are not assigned to 309 AMARG. The tools will be turned in to the TCM. The TCM will send a letter to the losing activity stating the circumstances and providing the tool ID number. In all instances, tools found will be brought to the attention of the supervisor and the FOD prevention officer in order to stress the importance of tool control to all personnel during staff, production, and FOD prevention meetings.

10.12.4.13.6.6. (Added) When a reported lost tool is found after the search procedures are terminated, the tool custodian will report the found tool to the immediate supervisor.

10.12.4.13.6.7. (Added) The supervisor will send a notification letter of the found tool to the division chief, the Director, Tool Issue Center and LTCM (in turn) describing the circumstances of who, how, when, and where the tool was found, referencing the tool ID number and the lost tool report number assigned by 309 AMARG/QPQ.

10.12.4.14. (Added) 309 AMXG Lost Tool Procedures:

10.12.4.14.1. (Added) The first-level supervisor will stop all work and have employees perform a search of the suspected area, and notify the second-level supervisor.

10.12.4.14.2. (Added) Upon notification of a lost tool/item, the 309 AMXG TCM will, with the supervisor, examine the situation and determine which type of search package to issue; LOA, NLOA, or compromised component integrity (CCI) or lost item. CCI packages are for tools that are lost in/on components that are repaired outside of the aircraft production area but may find their way to an aircraft. A lost item package is for non-tool items not stored in a tool kit.

10.12.4.14.3. (Added) 309 AMXG the LOA search package shall contain five worksheets:

10.12.4.14.3.1. (Added) The lost tool information sheet is used to compile information about the circumstances of the lost tool. The lost tool information sheet will be left with the 309 AMXG TCM for tracking purposes.

10.12.4.14.3.2. (Added) The maintenance work request (MWR) worksheet: Provides the Aircraft Logistics Specialists (ALS) sufficient information to request an MWR.

10.12.4.14.3.3. (Added) 309 AMXG checklists to help the supervisor complete the search package.

10.12.4.14.3.4. (Added) The AFMC Form 310; the official report for lost tools.

10.12.4.14.4. (Added) The NLOA tool search package shall contain four forms:

10.12.4.14.4.1. (Added) The lost tool information sheet.

10.12.4.14.4.2. (Added) Checklists.

10.12.4.14.4.3. (Added) AFMC Form 310.

10.12.4.14.5. (Added) The CCI lost tool search package, if determined to be CCI, will contain four forms:

10.12.4.14.5.1. (Added) The lost tool information sheet.

10.12.4.14.5.2. (Added) Checklist.

10.12.4.14.5.3. (Added) AFMC Form 310.

10.12.4.14.5.4. (Added) The CCI will use the standard NLOA tool search package.

10.12.4.14.6. (Added) 309 AMXG a Lost Item package (non-tool items not stored in a TK) will utilize the AFMC form 310 only and follow the same criteria as a lost tool.

10.12.4.14.7. (Added) 309 AMXG when issuing a search package, the 309 AMXG TCM will assign a database ID number and a control number. The lost tool package file and control number will be entered into the lost tool log located in the 309 AMXG TCM office. The 309 AMXG TCM will return the lost tool package to the supervisor in charge of the tool search. The lost tool package will have a 5-workday suspense back to the 309 AMXG TCM once it is issued.

NOTE: (Added) Each tool LOA will have a separate lost tool package initiated. All packages will contain single tool entries only.

10.12.4.14.8. (Added) 309 AMXG upon receiving a lost tool search package, the supervisor will assign technicians to assist in search procedures until all suspected areas have been searched and a period of two shifts have completed their physical search or the tool is found. A checklist is provided in each lost tool package to assist the supervisor in completing the documentation. The person who lost the tool will write a brief statement on how the tool was lost in Block 8 of AFMC Form 310. Describe supervisory efforts to locate the missing tool in Block 12 of AFMC Form 310.

10.12.4.14.9. (Added) 309 AMXG on a LOA lost tool package, the supervisor will request an MWR from the appropriate ALS, with an attached AFMC Form 959, to document the areas searched for LOA tools/items. During the search activities (two consecutive shifts or the tool/item being found), all first-level supervisors involved will supply all required information for lost tool/item package. Each shift will provide search documentation on the AFMC Form 959. When the search package is finished, the original MWR and attached AFMC Form 959 will be kept in the aircraft dead file.

10.12.4.14.10. (Added) 309 AMXG if the search package is LOA, the procedures on the 309 AMXG checklist will be followed. Conduct a complete and detailed search of all areas of the suspected aircraft and all areas of the dock that the tool/item could possibly be. If the tool/item was lost in the incoming or flight test areas, the supervisor will take the lost tool/item package to the applicable weapon system flight test forms and records section to have aircraft documents marked with a "Red X". F-22 aircraft will be considered in prep-for-flight status (flight test) when any defined prep-for-flight event occurs (when applicable to aircraft). The following are defined prep-for-flight events: Fuel operations, engine installation, seat & canopy installation and final (top coat) coating application. The supervisor will refer to Chapter 9B for impoundment criteria and freeze requirements if the tool was determined to be LOA or CCI. At completion of the search, the supervisor will ensure all necessary forms and paperwork are completed and returns the lost tool/item package to the 309 AMXG TCM.

10.12.4.14.11. (Added) 309 AMXG for LOA packages that have not been found and an AFMC Form 310 has been completed; the production ALS will leave the original lost tool/item MWR open until Maintenance Review Team (MRT) meeting.

10.12.4.14.11.1. (Added) The production ALS will then create an MWR to initiate an information entry (TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation,*

Policy and Procedures) into the aircraft AFTO Forms 781A during the MRT. The entry in the AFTO Form 781A will contain the type of tool/item, TK ID number, and the area on the aircraft where it was lost. The lost tool/item package will be discussed during the MRT so that flight test technicians will be alerted when performing maintenance in the area where the tool/item was lost. The AFTO Form 781A information entry will remain in the aircraft forms until the aircraft returns to the owning unit. The AFTO Form 781A information entry will stay in the forms so that the owning unit will have an immediate notification of a lost tool/item upon return of the aircraft.

10.12.4.14.12. (Added) 309 AMXG if the tool is found before the AFMC Form 310 is completed, the first-level supervisor and second-level production supervisor will sign the AFMC Form 310 in blocks 17A and 17B. The first-level supervisor will return the signed lost tool/item package to the 309 AMXG TCM who will file the package in the lost tool/item file. The lost tool/item package will be considered closed at this point.

10.12.4.14.13. (Added) The 309 AMXG TCM will provide a copy of the closed package to the weapons system specific aircraft forms and records and customer support sections even if the tool was found.

10.12.4.14.14. (Added) If the 309 AMXG search package is NLOA, the procedures on the 309 AMXG *Tool Not Lost On Aircraft or Not Compromised Integrity Checklist*, will be followed. Search all suspected areas the tool could have been lost. At the completion of the search, the supervisor will complete all necessary forms and paperwork as directed by the 309 AMXG TCM and return the lost tool package to the 309 AMXG TCM.

10.12.4.14.15. (Added) If the affected component has been routed from the aircraft squadrons (571 AMXS, 572 AMXS, 573 AMXS and F-22 Aircraft Maintenance Division) and the tool/item is not found, AFTO Form 95, *Significant Historical Data*, will be annotated. The first-level supervisor will annotate the AFTO Form 95 with the date, identity of the lost tool/item, steps taken to search the component, the result of that search, and a point of contact. If the component does not have an AFTO 95, a copy of the completed AFMC Form 310 will accompany the component.

10.12.4.14.16. (Added) 309 AMXG if a technician loses a tool/item while working in another 309 MXW group, all lost tool guidelines in this chapter and AFI 21-101 Chapter 10B and local supplements will be followed. In the event a 309 AMXG technician loses a tool/item in another wing not having clear lost tool/item guidelines in place, he or she must contact the 309 AMXG TCM for guidance.

10.12.4.14.17. (Added) 309 AMXG finalizing a lost tool/item package will start as soon as possible after completion of the search. Completed lost tool/item packages will be coordinated with flight and squadron-level supervision or the equivalent. After coordination, at the appropriate levels, all lost tool/item packages will be returned to the 309 AMXG TCM for finalization of package.

10.12.4.14.18. (Added) To terminate the 309 AMXG search for a lost tool/item that cannot be found, the 309 AMXG Commander, Deputy Director, squadron/division directors or deputies are authorized to sign Block 18 of the AFMC Form 310. To release an aircraft that has been impounded because of a tool/item issue, Chapter 9B must be followed to clear the impoundment.

10.12.4.14.19. (Added) 309 AMXG if the 309 AMXG TCM and supervisor, in coordination with the appropriate squadron/division director or deputy, determines negligence, a DD Form 200, *Financial Liability Investigation of Property Loss*, and DD Form 1131, *Cash Collection Voucher*, will be given to the owner of the tool. If no negligence was involved, the 309 AMXG TCM will clear the AFMC Form 310 and return the original lost tool package to the technician for tool replacement at the appropriate tool center.

10.12.4.14.20. (Added) 309 AMXG upon completion of the lost tool/item package, it will be filed in the 309 AMXG TCMs office for a minimum of 2 years. Upon completion of the AFMC Form 310, it will be returned to the 309 AMXG TCM. If the report is NLOA, the 309 AMXG TCM will make four copies (one for the 309 MXSS TCM file, one for the 309 AMXG TCM file copy, one for the tool owner's supervisor, and one for the tool owner's squadron/second-level supervisor's office). The original report is returned to the tool owner, who will return it to the supporting tool crib to get a replacement tool. If the report is LOA, the 309 AMXG TCM will make six copies: one for the 309 MXSS TCM, one for the 309 AMXG TCM file, one for the tool owner's supervisor, one for the tool owner's squadron/second-level supervisor's office, one for the appropriate customer support office (CSO), and one for the forms and records office. The original report is returned to the tool owner, who will return it to the supporting tool crib to get a replacement tool.

10.12.4.14.20.1. (Added) For all F-22 Raptor Lost Tool Reports, a copy will be forwarded to the LM Aero Tool POC.

10.12.4.14.21. (Added) 309 AMXG, in the event there is no one in the 309 AMXG Tool Control office available to give out a search package during swing shift, weekends, or holidays, a package can be obtained from either the 309 AMXG Quality Office or the 309 AMXG Control Room in Building 225. The supervisor will fill out the lost tool/item information sheet in the lost tool/item package and leave it with the 309 AMXG Control Room. 309 AMXG Control Room will notify the 309 AMXG TCM at 586-4272 at the beginning of the next regular workday. In the event the 309 AMXG TCM is not available during normal dayshift duty hours, a lost tool/item package can be obtained from the 309 AMXG Program Management Office.

10.12.4.14.22. (Added) 309 AMXG Found Tool Procedures:

10.12.4.14.22.1. (Added) Any time a tool is found, the first-level supervisor will notify the 309 AMXG TCM and give information where the tool was found and by whom.

10.12.4.14.22.2. (Added) The 309 AMXG TCM will research the lost tool records to determine if the tool had previously been reported as lost and not found.

10.12.4.14.22.3. (Added) If the tool has never been reported lost, the 309 AMXG TCM will analyze the tool markings to determine ownership.

10.12.4.14.22.4. (Added) The 309 AMXG TCM will prepare a "found tool package" using the found tool checklist and AFMC Form 310. The found tool checklist will be used to assist in filling out and completing the AFMC Form 310.

10.12.4.14.22.5. (Added) Coordination of the found tool package will be at the flight and squadron/division level or equivalent. The 309 AMXG TCM will return the tool to the owner or tool crib, whichever is applicable.

10.12.4.14.22.6. (Added) The AFMC Form 310 will be signed by the second-level supervisors and squadron/division directors or deputies. The 309 AMXG TCM is the final signature needed for found tools.

10.12.4.14.22.7. (Added) Found tool packages will be treated the same as lost tool packages as far as logging, tracking and filing.

10.12.4.14.22.8. (Added) The 309 AMXG TCM will notify the appropriate CSO of the found tool/item. The CSO will notify the appropriate unit quality office, by phone or e-mail, that the tool/item was found. If the unit finds a lost tool/item and notifies CSO, the customer support representative will notify the 309 AMXG TCM so that a found tool/item package can be started.

10.12.4.14.15. (Added) 309 CMXG; for those areas within the technical repair or advanced composites squadrons (574 AMXS, 575 AMXS) where the first-level supervisor determines that the integrity of an aircraft component may have been compromised by the loss of a tool/item, repair of that component will be stopped immediately. The component, along with the work area, will be thoroughly searched. The first-level supervisor will determine if x-ray or disassembly is required based on the amount of component teardown at the time the tool/item was lost. The supervisor will obtain a lost tool/item from the 309 AMXG TCM. The serial number of the component will be annotated in Block 7B of AFMC Form 310. The steps taken to ensure the integrity of the affected component will be annotated in Block 12 of AFMC Form 310.

10.12.4.16. (Added) EMXG. The supervisor may download a lost tool package from the 309 EMXG/QP community of Practice-site or request a lost tool package from the 309 EMXG TCM. Either way the TCM will assign a control number to the package.

10.12.4.16.1. (Added) The supervisor and employee will complete an AFMC Form 310 and AF Form 2519, *All Purpose Checklist*, and submit it to the 309 EMXG TCM. The 309 EMXG TCM will make three copies of the lost tool report. One for the 309 MXSG TCM's file, one for the supervisor, and one for the wing FOD manger, if the lost tool resulted in a FOD incident. The original AFMC Form 310 will be returned to the employee, who will turn it in to the supporting tool crib to receive a replacement tool. If the tool was "lost on aircraft", the hangar supervisor and the 309 AMXG TCM must be notified immediately as 309 AMXG lost tool procedures must be followed. For a lost maintenance stamp/cap, the original AFMC Form 310 will be turned in to the group stamp manager for replacement.

10.12.4.17. (Added) 309 MMXG, to terminate the search for a lost tool/item that cannot be found, the 309 MMXG Commander, Deputy Director, squadron/division directors or deputies are authorized to sign Block 18 of the AFMC Form 310. Lost stamps will be reported and documented lost tool/item procedures in AFI 21-101 AFMC Sup 1, paragraph **10.15**.

10.12.4.17.1. (Added) If the supervisor initiates an AFMC Form 310 through the Ogden portal (forms) all the above reporting procedures apply.

10.12.4.17.2. (Added) 309 MMXG. A component or end item involved in a reportable FO incident will be impounded. Release of the impounded items cannot happen until a thorough investigation has been conducted by maintenance. Quality, safety, or both may be requested to participate in the investigation. The group commander or group director shall have sole responsibility for release of an impounded item.

10.12.5.1. (Added) Security: Management will ensure that each TK can be locked so as to prevent unauthorized access. This may be accomplished by using tool containers that have an integral locking system or any other locking device (i.e., padlocks cables or a lock bar). Management will ensure that all tools and TKs within a PSC or tool crib/PSC are secure to prevent loss.

10.12.5.1.1. (Added) Individuals will secure/lock tools, TK or equipment anytime the tool or tool kit is left unattended (not being watched or looked after). If a tool or item can be removed from a TK without an employee's knowledge then the TK is not secured.

10.12.6. (Added) 309 AMARG Security. Personnel in possession of ITK/CTK are also responsible for its security. As such, responsible personnel will:

10.12.6.1. (Added) Ensure kits are stenciled/etched IAW paragraph 2.

10.12.6.2. (Added) Ensure TK and canvas bags are locked whenever leaving the immediate work site. Hand carry type kits will be cabled in order to prevent removal.

10.12.6.3. (Added) Ensure temporary TK and canvas bags have a tool counter with them and both counter and bag are marked with the permanent tool kit ID number.

10.12.6.4. (Added) Use tool counters to reflect the number of tools contained in a temporary tool kit. The tool box/pouch and counter will be included in the number of tools contained in the temporary tool kit.

10.12.6.5. (Added) Provide security and accountability for special tools or test equipment on temporary issue from the tool issue centers. Turn in tool kits when no longer needed. For inventory purposes, the individual will maintain a copy of the computerized TKCRL.

10.12.6.6. (Added) Notify the supervisor immediately when adequate security is not available or when tools are missing.

10.12.6.7. (Added) Ensure tool kits are always in inspection order for supervisors and applicable inspection teams to include clean and serviceable foam and drawers free of work residue or debris as well as tools not in use in their proper cut out locations.

10.13.2.1. (Added) 309 AMXG. Every new production technician will be scheduled to attend course number 1376, *Initial Tool Control Training*, by the training element (309 AMXG/OBST). Annually, all production technicians and all levels of their supervision must attend course number 1400, *Annual Recertification*, or course number 1375, *Refresher Tool Control Training*. 309 AMXG/OBST updates tool control training in the TSS, and 309 AMXG/OBST will update section II of the PAC folder.

10.13.4.1. (Added) Initial Work Center Briefings. All newly assigned, TDY, contractors, transferred, and loaned personnel, with access to production areas, will receive a work center specific tool and equipment briefing. This briefing will consist of a clear understanding of tools to include accountability procedures, necessity of security, and lost tool/item procedures. This briefing will be documented and maintained by the work center supervisor IAW normal in processing procedures.

10.13.7. (Added) 309 AMARG employees will return the signed original AFMC Form 311, to 309 SPTS/MXDUA tool crib prior to receiving a tool issue.

10.14.1.1. (Added) Support personnel (e.g., civil engineering and vehicle maintenance personnel, etc.) working on the flight line and/or other production areas shall ensure positive control of tools, components, hardware, and consumables. As a minimum, items will be inventoried and accounted for prior to, and at the end of, each task. Lost tool procedures must be applied by any center support organization when items carried by employees cannot be accounted for.

10.14.1.2. (Added) When support personnel (e.g., civil engineering and vehicle maintenance personnel, etc.) working in any maintenance production area cannot locate a tool/item after a immediate search the individual will notify the building/facility custodian or section supervisor who in turn will notify the applicable Tool/Equipment Monitor.

10.14.2.1.1. (Added) Contractor personnel employed by the 309 MXW will develop and implement procedures to control/account for tools/items that comply with this instruction.

10.14.3. (Added) Contractor's support responsibilities.

10.14.3.1. (Added) Tools in possession of contractors will be identified, accounted for and controlled by the contractor IAW AFI 21-101 AFMC Suo 1 paragraph **10.9.1.26**.

10.15. (Added) Control of crib-issued loaned tool procedures:

10.15.1. (Added) Tool crib/PSC is designated as the point of contact for offering customer assistance within the group areas. Tool crib/PSC will support customer requirements for TK issue, maintenance, or turn-in and will maintain stocks of temporary issue tools in support of customer needs.

10.15.2.1. (Added) Crimpers, when used, will meet requirements stated in TO 1-1A-14, Installation Practices for Aircraft Electric and Electronic Wiring, which requires crimpers to be checked for serviceability by means of a GO/NO-GO gage.

10.16. (Added) Procedures for control of tooling included in TCTO/mod kits.

10.16.1. (Added) TCTO and TK modifications will be controlled as other TKs. Inspection, inventory and lost tool requirements apply to all dispatchable and TCTO TKs.

10.16.1.1. (Added) 309 AMARG. Tools in TCTO or Modification (MOD) Kits. All Tools included in TCTO/MOD kits will be turned into the tool room to etch and loaned to the using shop for the duration of the project.

10.17. (Added) Procedures to ensure organizations do not purchase tools without approval of the Industrial Services Group.

10.17.1. (Added) Each organization will have procedures in place to ensure tools are not ordered or duplicated unless written approval is obtained from the center TCM. If special conditions exist that preclude tool crib/PSC from providing the tools required to accomplish the mission, the organization's tool manager needs to prepare and deliver a written request to the center tool manager for authorization to procure the required tools. Their request must describe the procurement source to include the contract vehicle, fund site, and the procuring and contract management activities.

10.17.1.1. (Added) The request will then be forwarded to 309 MXSS/MXDVAC, Tool Management Section, for concurrence/non-concurrence. Once tool crib/PSC has concurred/non-concurred, the request will be returned to the requesting organization's TCM for processing.

TCMs will ensure that all purchased tools are processed through tool crib/PSC prior to use. Tool Crib/PSC will enter purchased tools into the tool inventory management system to ensure accountability.

10.17.2. (Added) 309 AMARG Tool Purchases (Acquisition). Tool issue center personnel are the only personnel authorized to purchase tools. All tool purchases will be approved by the TCM prior to purchase.

10.17.3. (Added) 309 MMXG Tool Request Procedures. All tool requests will be coordinated through the 309 MMXG TCM. All tool requests will be forwarded by the TCM to (Org?) 309 MXSS/MXDVACB. If MXDVACBA deems the request is not a tool the request will be forwarded back to the TCM and at this time the requestor will be instructed to purchase the tool by other means i.e., government purchase card.

10.18. (Added) Procedures for contract field teams when performing maintenance at the 309 AMARG.

10.18.1. (Added) Depot On-Site Contractor Augmentee Team (DO-CAT) employee's performing depot maintenance functions will be issued tools from tool crib/PSC and will comply with all applicable tool control regulations.

10.18.2. (Added) Other Contractors.

10.18.2.1. (Added) Other contractors performing functions in industrial areas on the center will be required to have a method for controlling and accounting for tools used and will be written into their contracts. This program must be outlined in the contractor's quality plan and must be coordinated with the respective contracting officer and contract functional manager or his/her designated representative. All contractors working on the center will be required to inventory their tools at the beginning of the shift, at the end of each task, and at the end of each shift to check for any lost or missing tools. In addition, the end of shift inspection will be documented and documentation will be kept for 2 years or until the completion of the job. Any lost tools not found must be reported immediately to the contracting officer, production area supervisor, and group tool manager. All contractors authorized use of Air Force tools will ensure these tools are properly marked IAW this supplement. Control and issue of government provided contractor TKs, kit template, and ID numbers will be accomplished using Hill AFB Form 516 and Hill AFB Form 515. Contractors providing their own tools will ensure all tools are marked with an ID number consisting of the first initial of the last name and last four digits of the Social Security Number. A list of the ID numbers will be supplied to the center tool manager and the group TCM.

10.19. (Added) Individual Responsibilities:

10.19.1. (Added) Center TCM.

10.19.1.1. (Added) Is the single point of contact on all matters concerning tool control and accountability.

10.19.1.2. (Added) Provides guidance for lost tool policies and procedures.

10.19.1.3. (Added) Establishes center supplements, procedures, and guidelines for tool control and accountability.

10.19.1.4. (Added) Monitors TK issues to ensure that tool lists are standardized and that additions or appendages are minimized.

10.19.1.5. (Added) Interfaces with private contractors on actions regarding tool management.

10.19.1.6. (Added) Offers assistance with interpretation of instructions concerning TK issues.

10.19.1.7. (Added) Is the authority on tool marking.

10.19.1.8. (Added) Decides and authorizes items/tools to be asterisk on the TKCRL.

10.19.1.9. (Added) Coordinates tool control policy and problem resolution with group and MAJCOM TCMs.

10.19.1.10. (Added) Approves acquisition of tools required by the product groups/organizations. Tool crib/PSC is the sole organization authorized to order hand tools for depot maintenance organizations. (See **Attachment A10.19.1**).

10.19.2. (Added) Group TCM:

10.19.2.1. (Added) Ensure a biennial review of TK templates is accomplished and documented by the responsible organizations. Coordinate the biennial review for each assigned TK design for content and verification that all templates contain all necessary and required tools. Maintain completed biennial template review records for 2 years.

10.19.2.2. (Added) Ensure tools are standardized across the group.

10.19.2.3. (Added) Provide monthly data to the center TCM, center FOD Manager and their respective product group Quality Assurance personnel on the number of tools lost/recovered in their organization.

10.19.2.4. (Added) Open and track AFMC Form 310 reports until closure. Maintain AFMC Forms 310 on lost tools not found for 2 years.

10.19.2.5. (Added) Review and coordinate all tool requests.

10.19.2.6. (Added) Provide assistance to managers and employees on policies and procedures regarding the tool control and accountability program.

10.19.2.7. (Added) Coordinate policy changes with the center TCM.

10.19.2.9. (Added) Ensure hand tools are not ordered by organizations other than 309 MXSS/MXDVAC. (See **Attachment A10.19.2**)

10.19.3. (Added) 309 AMARG TCM:

10.19.3.1. (Added) 309 AMARG. The TCM will ensure templates are reviewed annually. This will be accomplished by reviewing 25 percent of the templates each quarter. The objective of this annual review is to eliminate excess or infrequently used tools, add new tools needed to perform maintenance functions as outlined in supporting technical orders, incorporate supplemental tool listings into the master tool listing, and ensure standardization of like kit types. Supervisors should identify duplicate and infrequently used tools on each tool kit. After the review, supervisors will send the copy back to the TCM with updates annotated so the template can be changed.

10.19.3.2. (Added) 309 AMARG. Conduct joint reviews with divisions that use like tool kits as any changes made to the tool kit template will affect all tool kits within the series.

10.19.3.3. (Added) 309 AMARG. The ITKs will be updated as agreed to during the joint review.

10.19.3.4. (Added) 309 AMARG. A template review team should consist of the TCM, quality assurance, planner, section supervisor, and a mechanic/technician required to perform the assigned function.

10.19.3.5. (Added) 309 AMARG. Obtain a copy of templates to be reviewed.

10.19.3.6. (Added) 309 AMARG. Compare template and associated appendages with the respective tool lists.

10.19.3.7. (Added) 309 AMARG. Conduct a joint review of like tool kits to ensure their most efficient use.

10.19.3.8. (Added) 309 AMARG. Review technical orders and other supporting documentation to validate tool requirements.

10.19.3.9. (Added) 309 AMARG. Identify appropriate additions or deletions.

10.19.3.10. (Added) 309 AMARG. Send a copy of the changes to the TCM with the supervisor's signature.

10.19.3.11. (Added): 309 AMARG. Forward approved changes to tool crib so template can be updated and procurement action taken.

10.19.3.12. (Added) 309 AMARG. The tool crib manager will recall toolboxes to re-shadow, place new tools, and collect deleted tools from template. All deleted tools will be de-etched and returned to stock.

10.19.3.13. (Added) 309 AMARG. All toolboxes will have two keys for each lock. The second key will be retained in the tool issue center.

10.19.3.14. (Added) 309 AMARG. Request permission from RCC supervisor to add or delete tools from the TKCRL. Pen and ink changes will be allowed and annotated on all copies of the TKCRL until a new listing is generated. Anytime tools are added or deleted from and ITK/CTK a letter is required from the RCC supervisor to the TCM. Changes to an ITK/CTK will not be accomplished prior to approval by the TCM. A new listing will be issued in three copies after the TCM approves the changes. A change to an ITK will require that all like ITKs be changed.

10.19.4. (Added) The 309 AMXG TCM will:

10.19.4.1. (Added) 309 AMXG review quality deficiency data provided in QIMSS for deficiency trends and compliance with tool control directives. Provide feedback to appropriate management levels IAW *309th Aircraft Maintenance Group Quality Plan*.

10.19.4.2. (Added) 309 AMXG provide a LOA or a NLOA tool search package for tools reported lost within 309 AMXG.

10.19.4.3. (Added) 309 AMXG maintain control of the lost tool search files IAW AFI 33-322.

10.19.4.4. (Added) 309 AMXG provide data and information monthly on lost tool activities to 309 AMXG division and squadron offices.

10.19.4.5. (Added) 309 AMXG provide direction to 309 AMXG, division, squadron, and production management on tool issues by interpreting directives and instructions.

10.19.4.6. (Added) 309 AMXG be the contact point within 309 AMXG for 309 MXW and higher headquarters tool matters.

10.19.5. (Added) Supervisors:

10.19.5.1. (Added) Before requesting any tools (i.e., tool card, ITK, hand tools, etc.) for employees, ensure training requirements have been met IAW AFI 21-101 AFMC Sup 1, paragraph **10.13**.

10.19.5.2. (Added) Ensure all PME items in an employee's TK are forwarded to their respective PMEL monitor for calibration, prior to the calibration due date.

10.19.5.3. (Added) Notify tool crib/PSC and the group tool manager of any changes that may affect the ability to trace a TK or temporary issued tools. Changes include items, such as organizational symbol, phone number, work area, or name change.

10.19.5.4. (Added) Instruct employees to turn in their ITKs and temporary issued tools to tool crib/PSC upon changing assignment or termination of employment. Notify tool crib/PSC no less than 5 days in advance of a requirement for a TK turn-in. Supervisors may have kits being turned-in assigned to them for up to 60 days pending reissue to a new employee, the kit must be kept in a secure area IAW Paragraph **10.12.3**.

10.19.5.5. (Added) Turn in their assigned CTKs to tool crib/PSC upon changing assignment or termination of employment. If the CTK is still needed, the departing supervisor will ensure the CTK is transferred to the new supervisor or his second-level supervisor before leaving. Notify the tool issue center no less than 5 days in advance of a requirement for a CTK turn-in.

10.19.5.6. (Added) Request TK requirements for new employees or employees being transferred into the work area to tool crib/PSC and the group TCM as soon as possible, but not less than 30 days prior to actual need date.

10.19.5.7. (Added) Implement lost tool procedures immediately when notified of a lost tool by an employee or the discovery of a lost tool during supervisory inspections. Report lost tools IAW established lost tool procedures.

10.19.5.8. (Added) When employees permanently change his/her group RCC ensure information (i.e., tool card) provided to tool crib/PSC tool cribs has been updated for the purpose of tracking loaned tools and equipment.

10.19.6. (Added) 309 AMARG branch supervisors will:

10.19.6.1. (Added) 309 AMARG determine the composition of all tool kits. All changes to the TKCRL will require a written letter to the tool issue center. Supervisors will ensure that both the supervisor and employee copies of the TKCRL are identical. If supervisor requires some individuals to have additional tools in their kit a request must be submitted to the TCM. Once the addition(s) to the list is made, the supervisor and tool attendant will sign the request letter and maintain a copy.

10.19.6.2. (Added) 309 AMARG provide locked enclosures, storage racks, cables, chains etc., to secure ITK/CTKs and enforce the use of available security devices by personnel.

10.19.6.3. (Added) 309 AMARG ensure ITK/CTKs of personnel who will be absent for 30 days or longer (TDY, sick, annual leave, etc.) are properly stored.

10.19.6.4. (Added) 309 AMARG ensure AFMC Form 309 has the individual's name, organization; kit number and year legibly typed or printed in ink. The form will be put in a protective folder/envelope and placed in the kit.

10.19.7. (Added) 309 MXSS/MXDVAC Attendants:

10.19.7.1. (Added) Require employees to display their computer generated tool card before services are performed. User information will be kept on file by 309 MXSS/MXDVAC.

10.19.7.2. (Added) Review and update employee tool card information upon assignment to a group RCC.

10.19.7.3. (Added) Provide CTK issue and replacement services only to the supervisor who accepted responsibility for the CTK and up to three individuals the supervisor may designate in writing to tool crib/PSC that may exchange tools for their CTK.

10.19.7.4. (Added) Ensure tools are properly marked and assigned to a master TKCRL before issue.

10.19.7.5. (Added) Provide documentation for tools on back order and tools being repaired.

10.19.7.6. (Added) Remark tools as required if tool ID numbers have become worn or unreadable.

10.19.7.7. (Added) Verify TK compliance IAW local regulations when a TK is issued or updated.

10.19.8. (Added) TK Owners:

10.19.8.1. (Added) Are accountable for all tools listed on their TKCRL listing, including items listed on appendage and supplemental listings.

10.19.8.2. (Added) Ensure all temporary loaned tools are returned to point of issue in the prescribed time frames.

10.19.8.3. (Added) When returning issued TK to tool crib/PSC tool cribs ensure TK is returned in the same shape as issued (i.e., all stickers removed, numbers removed (both inside and out), vices removed, and top/side boxes unattached). Normal wear and tear is to be expected.

10.19.8.4. (Added) Maintain security of TK and all temporary loaned tools at all times.

10.19.8.5. (Added) Conduct and document TK inventories IAW Center, wing, group, and squadron directives and procedures. Ensure the AFMC Form 309 is properly annotated.

10.19.8.6. (Added) Adhere to and initiate lost tool procedures immediately upon discovering that all assigned tools are not accounted for.

10.19.8.7. (Added) Ensure that tools in the TK are not modified in any way unless written authorization is received prior to the modification.

10.19.8.8. (Added) Turn PME in for calibration when required.

10.19.8.9. (Added) Request a replacement copy of TKCRL when it becomes hard to read or is illegible.

10.19.8.10. (Added) When permanently changing a group RCC ensure information (i.e., tool card) provided to tool crib/PSC tool cribs has been updated for the purpose of tracking loaned tools and equipment.

10.19.8.11. (Added) When issued a TK verifies compliance with local instructions.

10.19.9. (Added) 309 AMXG when transferring, assuming different duties, resigning, or retiring, the TK owner will make an appointment with tool crib/PSC tool centers or contract vendor to return the TK to the crib, where the TK was originally issued. The technician, together with the tool crib attendant, will inventory the TK to ensure all tools are turned in. The tool crib attendant will give the technician two copies of the original Hill AFB Form 515, signed and dated by the tool crib attendant and the individual turning in the TK, indicating that all tools are accounted for and turned in. One copy will be given to the supervisor, and the technician will keep the other for his/her records.

14.39.1.2. (Added) Maintenance personnel assigned to 309 AMXG and 309 AMARG involved in on-equipment maintenance will have Dropped Object Program (DOP) training annotated in their appropriate training records or Management Information System (MIS). Training should include, but is not limited to, inspection, installation, removal, and repair procedures for aircraft panels, doors, access covers, cowlings, etc. Also, include training on the care of panel latches, fasteners, nut plates, and other locking devices.

14.39.1.4. (Added) 309 AMXG and 309 AMARG commanders/directors, or deputies will ensure appropriate personnel conduct DOP investigations.

14.39.1.6. (Added) Quarterly Briefing: Supervisors will brief assigned flight test flight crews and flight test maintenance personnel assigned to or associated with 309 AMXG and 309 AMARG on the DOP, at least quarterly (See AFMC (Added) paragraph **14.41.2.23.2.**)

14.41. (Added) There are no organizational responsibilities between 309 AMARG and the host Davis-Monthan Air Force Base (DMAFB) for flight lines, runways, taxiways, and ramp areas outside of the 309 AMARG gates.

14.41.1.1. (Added) High-potential foreign object areas within the 309 MXW are listed in a memorandum format available on the 309 MXW/QP CoP at <https://www.dmy.af.mil/afknprod/ASPs/CoP/EntryCoP.asp?Filter=OO-LG-MC-70> under FOD/DOP information. It is imperative group FOD/DOP Focal Points (FP) coordinate with management and re-evaluate an area in the event of changes or new workload locations and forward updated listings to the 309 MXW FOD/DOP FP to maintain currency.

14.41.2.1. (Added) Items may be placed in or on the intake or intake lip area with engine(s) installed while the aircraft undergoes modification or repair only when an intake cover, plug, or dam is installed to prevent migration of items into the engine. Items will not be placed in or on engine intakes or intake lip areas while an aircraft is in the receiving/prep for flight/ready for flight arena of flight test.

14.41.2.1.1. (Added) The following areas are exempt from the cap/plug requirement:

NOTE: (Added) This does not alleviate these areas from using protective plugs and caps when specific repair, maintenance, or testing is accomplished on any equipment or requirements IAW TO 00-20-14. In addition all stored assets and unmated connectors on units that contain circuitry susceptible to electro-static discharge (ESD) damage shall be protected IAW TO 00-25-234,

General Shop Practice Requirements for the Repair, Maintenance and Test of Electrical Equipment.

14.41.2.1.1.1. (Added) Research, development, or testing laboratory environments (i.e., software, precision measurement, environmental) due to the controlled environmental condition which exist and the absence of maintenance actions which generate residue.

14.41.2.1.1.2. (Added) 309 AMARG storage areas designated as Type 4000.

14.41.2.1.1.3. (Added) Designated areas where items are processed for disposal, demilitarization, or being turned in for disposal through the DRM O or other disposal agencies IAW DOD 4160.21-M, *Defense Material Disposition Manual* or DOD 4160.21-M-1, *Defense Demilitarization Manual*.

14.41.2.3. (Added) All 309 AMARG mechanics must follow 309 AMARG Check sheet #20, Engine Intake/Exhaust Maintenance, for basic engine inlet or intake and exhaust rivet replacement procedures. File completed check sheets in the aircraft work control package, or AFTO Form 781 series, and/or Aviation Resource Management System (ARMS) Aircrew/Mission Flight Data Document. Planners will identify any additional potential FOD hazards with precautionary measures if required on the work control document.

14.41.2.7.3.1. (Added) All personnel, when entering an A-10 “White Area”, will remove all pocket contents and other loose items will also be removed. In all restricted F-22 Raptor areas, personal items will be controlled by removing items and placing them in an issued personal pack. Personal packs are zippered canvas pouches worn around the waist and secured by an adjustable belt. They are used to control loose personal items (i.e., jewelry, wallet, pens/pencils, keys etc.) that may create a potential FOD hazard. Personal packs also increase the overall FOD awareness in the area. Packs must remain closed unless being accessed. For tasks where operational or space constraints prohibit its use, the personal pack may be temporarily removed. Personal packs are for personal items only. Under NO circumstances shall anyone carry tools, consumables, FO residue, miscellaneous small parts or hardware in their personal pack. Badges will be removed and placed in the clear pocket compartment on the front of the pack.

14.41.2.7.4. (Added) FOD awareness and prevention checklist for visiting personnel escorts is available on the 309 MXW/QP CoP.

14.41.2.10. (Added) Upon removing hardware from stock or a task kit, it will be placed in a positive closing container before taken into an area which requires a secondary PAC certification for closure.

14.41.2.12. (Added) Group management will ensure areas of responsibility (AOR) for clean-up events around buildings/portions of buildings/fence lines within the industrial area as defined by Air Field Management, around buildings adjacent to the flight line are clearly defined and designated. Coordination will occur with the facility manager to conduct weekly (minimum of monthly for 309 AMARG) clean-up events (weather permitting) around the exterior of these buildings to prevent migration of items which may become FO. Seventy-five feet from the building will be the area to keep clean as this correlates with the snow removal requirement for facility managers. This distance may be less if adjacent to a perimeter fence, flight line boundary or if two buildings border a roadway or common area, then the area will be equally split. Contact 75 CE (777-5731) with specific vacuum sweeper requests when potential FO conditions are observed that cannot be eliminated on the spot. Recommend groups share/cross utilize

equipment (when available) to assist with clean-up efforts. As a minimum, 309 AMARG FOD walks will be conducted once per month. The 309 AMARG Executive Director (DD) or QP Director, or 576 ARMS/CL will determine and direct additional FOD walks as needed. The 309 AMARG FOD FP will assign FOD walk AORs. Assigned areas will be posted in the FOD continuity books. Changes to the FOD walk AORs will be coordinated at the FOD meetings. When needed, updated AOR maps will be attached to the FOD meeting minutes. FPs will update their own continuity book maps as required.

14.41.2.12.1. (Added) Management within groups which possess high potential FOD area(s) will ensure these areas are designated as AORs for FOD walk purposes.

14.41.2.12.1.1. (Added) Prior to the departure/arrival of an aircraft from 309 AMARG, management/supervision will ensure an immediate area FOD check is accomplished on the portion of the flight line in which the aircraft will be arriving to or departing from. Mobile 2 and/or the escort vehicle will inspect the taxi route for FOD to and from the 309 AMARG/DMAFB gate for all arriving and departing aircraft. The 309 AMARG Follow-Me vehicle will also inspect the taxi route. Prior to any ground maintenance aircraft engine operation, management or supervision will ensure a FOD walk, in the immediate area around the aircraft, is accomplished by the responsible squadron.

14.41.2.12.1.2. (Added) 309 AMARG. Control will schedule the 309 AMARG motorized sweeper through the support squadron to sweep the flight line, parking pads, trim pads and taxiways at least twice a week. For immediate FOD problems that cannot be taken care of by an individual, contact 309 AMARG Control for the motorized sweeper, or QP-FP for the towable sweeper.

14.41.2.12.2. (Added) At 309 AMARG, a pre-tow FOD walk throughout the desert areas prior to a tow operation is impractical, so the tow team supervisor will ensure the tow route is closely monitored during the tow and will halt the operation when a FOD hazard is observed. The FOD hazard will be eliminated or an alternate route selected before the tow will continue.

14.41.2.12.2.1. (Added) At 309 AMARG Mobile 2 will inspect the taxi route for FOD to and from the 309 AMARG/DMAFB gate for all arriving and departing aircraft. The 309 AMARG *Follow-Me* vehicle will also inspect the taxi route.

14.41.2.18. (Added) A hazard free working conditions, although difficult to attain, are paramount for the safety of work center personnel. In conditions where no established safety guidelines are available, a Job Safety Analysis will be accomplished as outlined in AFI 91-301, *Air Force Occupational And Environmental Safety, Fire Protection, And Health (AFOSH)Program*. Consult 309 MXW Safety for all work center safety requirements.

14.41.2.19. (Added) Aircraft engine run or launch team personnel will remove and secure all jewelry, badges, lanyards and pocket contents prior to performing any engine run tasks.

14.41.2.20. (Added) Any 309 AMARG personnel observing damaged pavement will notify 309 AMARG control or the FOD/DOP program FP. The facilities management office will be informed in turn.

14.41.2.21. (Added) At 309 AMARG cut tires will be reported to flight test which will inspect the taxi route for possible cause. Flight test will notify the airfield management at DMAFB when necessary.

14.41.2.22.3.1. (Added) All aircraft sheet metal technicians that are designated to perform engine intake/exhaust area maintenance tasks (e.g. engine intake rivet replacement) will receive additional FOD prevention training specific to inlet/exhaust taping procedures, control of work order residue and mandatory FOD inspection requirements. Task specific training/certification for each aircraft MDS (as required) will be provided through traditional on-the-job training with a general overview taught during the initial and refresher FOD/DOP training courses. Training certifications will be documented on the applicable AF Form 797, *Job Qualification Standard Continuation*, form in the Individual Training Record (AF Form 623), or in the PAC record with a task identifier code for each aircraft model, design, series (MDS) that a technician is qualified to work.

14.41.2.22.3.1.1. (Added) For newly assigned 309 AMARG structural repair technicians, initial training will be conducted by the supervisor following a DPD approved structured on-the-job training (SOJT) lesson plan with certification documented in PAC record.

14.41.2.22.3.1.2. (Added) For basic engine inlet or intake and exhaust rivet replacement procedures at 309 AMARG, use the standardized checklist. Planners will identify any additional potential FOD hazards with precaution measures if required on the work control document.

14.41.2.23.2. (Added) At a minimum, supervisors will use OO-ALC FOD Prevention Committee Meeting minutes, as information for the quarterly briefing. The meeting minutes will be attached to the AFMC Form 316 for filing. It is the responsibility of all supervisors to brief their assigned employees and document the briefing on the AFMC Form 316, *Supervisor Safety Meeting Minutes*.

14.41.4. (Added) Recommend 309 AMARG and 309 AMXG management implement the use of magnets on selected flight line accessible vehicles year-round, unless the Safety Office deems inclement weather has rendered the magnet a hazard or snow exceeds the ground clearance, at which time it may be removed. Recommend items gathered by the magnets be collected for analysis by the wing or group FOD FP. If missing, keys, FOD removal tools and flashlights will fall under the lost item reporting criteria. For control purposes in 309 AMXG, the FOD removal tool and flashlights will be secured to the vehicle key ring and, when not in use, they will be stored in a protective pouch attached to the key ring. The pouch will be marked with the vehicle identification number.

14.41.8.12. (Added) Applicable in 309 AMARG any known or suspected FOD/DO occurring on the DMAFB side of the aforementioned areas will be reported to the DMAFB FOD monitor.

14.41.8.18. (Added) The group continuity book will also contain at a minimum: the most current years worth of FOD briefing material, which may also be in an electronic format.

14.41.8.19. (Added) All group-level appointment letters will be forwarded to the wing FOD/DOP FP within 30 days of appointment and will include the individual's name, office symbol and phone number. Group FOD/DOP FP will maintain current appointment letters for each squadron requiring a FOD/DOP FP.

14.41.8.20.1. (Added) The applicable group FOD/DOP FP will coordinate all FOD/DOP related issues through their applicable squadrons. The squadron FOD/DOP FP will serve as a point of contact for specific squadron related FOD/DOP issues and will be a mid to senior level supervisor appointed by the squadron commander/director/deputy.

14.41.8.20.2.1. (Added) 309 AMXG FOD/DOP FP will ensure a designated representative attends scheduled 309 AMXG Quality Circles on FOD and Improvement Team Meetings (contact 309 AMXG FOD/DOP FP for time/location of applicable meeting).

14.41.8.20.2.2. (Added) FOD/DOP FPs will ensure to coordinate the consideration, review, and testing of new or suggested FOD prevention technologies.

14.41.8.20.3. (Added) Each group FOD/DOP FP point will conduct periodic spot checks monthly within their areas of responsibility. Their entire area of responsibility does not require to be spot checked, but at a minimum: the area(s) or item(s) of concern indicated by the latest QIMSS data analysis will be followed-up on to ensure improvements/corrective actions are in process. Observations (to include no significant observations), will be documented on the locally generated form (group/squadron/flight monthly FOD spot check) located on the 309 MXW/QP CoP under FOD/DOP information. The data may be transferred over to an electronic version of the form for record keeping. Each group FOD/DOP FP will forward an electronic copy to the wing FOD/DOP FP each month.

14.41.8.20.8. (Added) 309 MXW will use the QIMSS data base.

14.41.8.20.10. (Added) Applicable in 309 AMXG; the customer reported FOD findings will also be provided to the wing FOD/DOP FP.

14.41.9.1.1. (Added) Notification will be sent up to the 309 MXW WOC. The WOC will notify the 309 MXW FOD/DOP FP, and any other designated personnel as per the locally developed FOD/DOP checklist and send the center FOD/DOP monitor an e-mail with a copy of the daily log entry for record keeping. The supervisor of the affected end item will ensure all reporting requirements are immediately accomplished and will relay this information to their respective group FOD/DOP FP.

14.41.9.1.2. (Added) 309 AMARG maintenance control will also notify the 309 AMARG FOD/DOP FP, who in turn will notify the center FOD/DOP monitor.

14.41.9.1.3. (Added) The 309 AMXG Control Center (777-2812) will be notified within 2 hours of the discovery. If the 309 AMXG Control Center is not staffed at the time, supervisors will contact the WOC (777-3238). If impoundment conditions exist, the supervisor will notify squadron management and the 309 AMXG Control Center of the impoundment within 2 hours through e-mail, written message, or telephone. After the initial FOD notification has been coordinated with 309 AMXG/QPC, 309 AMXG/QP, appropriate squadron/division directors, and 309 AMXG CC/DC; it will be forwarded to the 309 MXW FOD FP within twenty (20) hours of the incident.

14.41.9.1.4. (Added) For all F-22 Raptor FOD incidents the 309 AMXG FOD/DOP FP will supply a copy of the initial FOD report and subsequent investigation updates to the LM Aero FOD POC.

14.41.9.1.5. (Added) All customer-reported FO/FOD/DOs will be reported by the applicable weapon system specific customer support specialist through written media (e-mail) to the 309 AMXG FOD/DOP FP. This information is used to analyze FOD/DO trends and coordinate prevention methods and is reported quarterly at the center FOD Prevention Committee Meeting. Customer-reported FOD-related Deficiency Reports (DRs) will be included in the applicable 309 AMXG squadron quality performance indicators and briefed to management officials.

14.41.9.2.2. (Added) To meet the HQ AFMC 24 hour initial FOD incident reporting suspense; all engine damage (to include small turbine engines) will initially be reported as a FOD incident (unless caused by the natural environment or wildlife) until the investigation (to include forensic sampling) substantiates otherwise. Damage determined to have been caused by a workmanship discrepancy will be considered as a contributing factor to a FOD incident, not material failure.

14.41.9.6.1. (Added) Groups may use locally developed forms to gather information concerning FOD/DOP incidents, but before forwarding to the wing FOD/DOP FP, it will be entered onto the preferred FOD/DOP reporting form contained on the 309 MXW/QP CoP. When the damaged asset is contractor owned or being worked IAW a partnership agreement between the government and a contractor, 309 MXW Contract Management (CMO) and Public Affairs Offices (PAO) will be contacted to assist with ensuring the initial and subsequent reports are sterilized prior to release to the contractor or otherwise outside of government channels. Some contracts are let above the 309 MXW level so request the 309 MXW Contract Management Office assist to determine the proper contract office which needs to be communicated with to facilitate the review and sterilization of information before release.

14.41.9.6.2. (Added) At a minimum, group FOD/DOP FPs will provide the following known information in monthly updates: Indication that it is an update, material failure (yes/no), technical data deficiency (yes/no), preventable or non-preventable, most likely or root cause of FOD, any update on the description of incident, extent of damage, estimated cost to repair (man-hour cost, eng/module cost, component cost, total), and when applicable; an attachment of the processed forensic sample analysis.

14.41.9.6.2.1. (Added) When an investigation is completed, the group FOD/DOP FP will compose the final report and provide, at the minimum, the following information to the wing FOD/DOP FP: indication that it is the final report, material failure (yes/no), tech data deficiency (yes/no), preventable or non-preventable, most likely or root cause of FOD, any update on the extent of damage, and the cost to repair (labor hour cost, eng/module cost, component cost, total), action taken to prevent recurrence, trends, analysis and recommendations.

14.41.9.7. (Added) The 309 AMXG FOD/DOP FP will ensure communication has been established with the owning unit to inform them of the initial findings within 24 hours of all FOD discoveries occurring when an aircraft is in the process of the Programmed Depot Maintenance/Functional Test process. As information becomes available, updates (to include the final report) will also be provided to the owning unit, and applicable customer support representative.

14.41.9.9. (Added) Commanders/directors/deputies will ensure appropriate personnel are provided adequate time required to conduct/support FOD/DOP investigations.

14.41.9.9.1.8. (Added) When a confirmed FOD event occurs with turbine or jet engines and the damage is beyond repairable limits established in the applicable technical order, a forensic sample will be collected; unless the wing FOD FP agrees it is not necessary due to internal material failure and provides a message indicating the requirement has been waived. A copy of the waiver will be placed in the FOD investigation folder. The sample from the damaged area will be preserved in the event it is required to be processed by the Failure Analysis Service Technology (FAST), Inc. to aid in the investigation. Samples will be taken by group or engine shop personnel trained and authorized in collecting a FAST sample. The sample will be taken when the damage is readily accessible and does not require disassembly beyond the scope of the

organization's capability to gain access to the damaged area. In this instance, when an asset is required to be sent to a repair and overhaul facility not associated with the 309 MXW, a formal request to obtain a forensic sample will accompany the asset. Forensic samples will be placed in the damaged asset's serialized historical records file/folder. The FAST sample will be placed in a sealed envelope marked "Foreign Object Damage Forensic Evidence - Do Not Open Unless to Process." An aircraft engine sample will be maintained as part of the engine data file/folder. 309 CMXG is designated as the repair and overhaul facility for its workload and is authorized to use the 309 MXW metallurgy lab when feasible. If the metallurgy lab is not used, 309 CMXG may collect a FAST sample and send it off to be processed by FAST Inc.

14.41.10. (Added) Additional minimum attendance from 309 MXW will also be the wing and each group FOD/DOP FP.

14.47.1.3.1. (Added) 309 AMARG Technical Order Distribution Office (TODO) will forward a copy of a TCTO to the Pre-production/Planning section (309 AMARG/OBWP), for a regeneration aircraft project in work.

14.47.2.1. (Added) 309 MXW/QPQ) Technical Data Program Office PM.

14.47.2.1.1. (Added) Designated by the 309 MXW quality chief.

14.47.2.1.2. (Added) Coordinates with headquarters providing interpretation and guidance on technical data issues and processes when not defined in other directives.

14.47.2.1.3. (Added) As required develops policies and procedures on technical data program requirements when not defined in other directives.

14.47.2.1.4. (Added) Attends monthly OO-ALC Center Technical Order Management (committee) meetings. As required, elevates issues and concerns to this committee impacting the 309 MXW technical data program.

14.47.2.1.5. (Added) Participates in the development of contractual requirements i.e., statement of work, performance work statement, or statement of objectives, and as requested, assists in source selection evaluations when TO services will be performed by a Government Owned Contractor Operated Technical Order Distribution Office (GOCO TODO).

14.47.2.1.6. (Added) Reviews 309 MXW Maintenance Support Group-Mission Support (309 MXW/OBM) GOCO TODO performance evaluation metrics.

14.47.2.1.7. (Added) Participates as a subject matter expert in the development of command and local technical data training courses.

14.47.2.1.8. (Added) Participates in wing-level inspections.

14.47.2.2. (Added) 309 AMARG TODO. The 309th Quality Assurance/Process Improvement Division (309 MXW/QPQL), TO Library is the 309 AMARG TODO. The 309 AMARG TODO has sole authority and responsibility for requisitioning all technical publications within 309 AMARG for all 309 AMARG activities IAW TO 00-5-1, *Air Force Tech Order System* and NAVAIR 00-25-100, *Naval Air Systems Command Technical Manual Program*.

14.47.2.2.1. (Added) 309 AMARG TODO will:

14.47.2.2.2. (Added) Maintain the 309 AMARG master file and limited technical publication files by performing the duties as described in TO 00-5-1, and NAVAIR 00-25-100. Use web

Automated TO Management System to manage Air Force technical publications, Technical Publications Library for Navy technical publications and a local database for Army, Coast Guard and other technical publications.

14.47.2.2.3. (Added) Review and approve requests to establish a new 309 AMARG technical publications sub-account library and assign a 309 AMARG Technical Order Distribution Account (TODA) number.

14.47.2.2.4. (Added) Maintain a separate file for each 309 AMARG TODA account containing the following:

14.47.2.2.4.1. (Added) TODA appointment letters.

14.47.2.2.4.2. (Added) TODA training certificates.

14.47.2.2.4.3. (Added) TO account audit checklists.

14.47.2.2.4.4. (Added) Last audit inspection report.

14.47.2.2.4.5. (Added) Prior audit inspection reports.

14.47.2.2.4.6. (Added) List of the account's assigned AF publications.

14.47.2.2.4.7. (Added) List of the account's assigned Navy publications.

14.47.2.2.4.8. (Added) List of the account's assigned Army publications.

14.47.2.2.4.9. (Added) List of publications, changes, supplements, etc., and/or e-mails provided to and signed for by the 309 AMARG TODAs. Ensure the time and date the TODA was called to pick up the data is noted or the e-mail notification is filed.

14.47.2.3. (Added) 309 AMARG TODO will notify 309 AMARG TODAs within 7 duty hours of the receipt of revisions, changes and updates for pickup and posting to the technical data in their account. Send the notification via e-mail to the custodian with a courtesy copy to the alternate and the supervisor. Attach a copy of the e-mail to the publication and have the custodian sign and date when the publication is picked up.

14.47.2.4. (Added) 309 AMARG TODO will report publication, distribution and requisition shipment discrepancies IAW the applicable service technical publication.

14.47.2.5. (Added) 309 AMARG TODO will annually reconcile the TODO records and review all applicable indexes.

14.47.2.6. (Added) Review 309 AMARG requirements tables each month to see if technical publications were rescinded; and if rescinded, remove the technical publication from the active technical publications library section and place in the rescinded library section.

14.47.2.7. (Added) 309 AMARG TODO will review 309 AMARG/OBWW sales orders, monthly workload projections and written requests from planners and 309 AMARG TODAs to order the technical publications needed in support of forthcoming projects. Provide the requestors with the status of the technical publications in writing within 30 days of their request.

14.47.2.8. (Added) 309 AMARG TODO will provide the planners with a list of updates, changes and revisions to Air Force technical publications each week.

14.47.2.9. (Added) 309 AMARG TODO will complete required Air Force technical order library courses.

14.47.2.10. (Added) 309 AMARG TODO is responsible to download digital technical publications to the TO library server to support current 309 AMARG workload needs as informed by 309 AMARG planners assigned to each division.

14.47.2.11. (Added) 309 AMARG TODO will verify monthly the currency of the digital publications on the server and download the updates.

14.47.2.12. (Added) 309 AMARG TODO will notify the applicable planners of the updates to ensure the applicable crew chiefs download the current technical publications to their computers.

14.47.2.13. (Added) 309 AMARG supervisors requiring a technical publications library will establish a 309 AMARG TODA ensuring:

14.47.2.13.1. (Added) 309 AMARG TODA is appointed in writing for that specific area, providing names, grades, phone numbers, e-mail addresses and security clearances to the 309 MXW/QPQL TO library (309 AMARG TODO).

14.47.2.13.2. (Added) The appointed 309 AMARG TODA completes required training through the Education and Training Management System (ETMS). Provide the date of official TO training, general course from the training certificate to the 309 MXW/QPQL TO library or direct 309 AMARG/OBMT to send a copy of the completion certificate to the TO Library. Refresher training may be performed by the TO Library on request.

14.47.2.13.3. (Added) Review applicable 309 AMARG/OBWW sales orders, monthly workload and directives and submit specific technical publications requirements in writing through the TODA to the QPQL TO Library. Ensure only the minimum technical publications are ordered to support a project and the requirement is canceled when the project is completed. Technical publication requests may be made by e-mail.

14.47.2.14. (Added) 309 AMARG TODAs will each maintain their own technical publications library and:

14.47.2.14.1. (Added) Manage 309 AMARG TODA accounts IAW TO 00-5-1, NAVAIR 00-25-100 and DA PAM 25-33, *User's Guide For Army Publications And Forms*, as applicable.

14.47.2.14.2. (Added) Submit 309 AMARG requests for additions and deletions to their 309 AMARG TODA library by letter to the 309 AMARG TODO TO library.

14.47.2.14.3. (Added) Correct 309 AMARG discrepancies found by 309 AMARG TO QPQL or other personnel during inspections.

14.47.2.14.4. (Added) Pick up 309 AMARG technical data updates, additions, changes, and etc., from the TO library within 8 duty hours of TO library notification. Complete the posting within 5 workdays of the receipt.

14.47.2.14.5. (Added) Ensure the validity of 309 AMARG technical data requests by reviewing the Air Force index on the World Wide Web (WWW) at www.pdsm.wpafb.af.mil/toprac/to-syste.htm or the Navy at the NATEC site <https://www.natec.navy.mil/> or the Army at <http://www.logsa.army.mil/>

14.47.2.14.6. (Added) 309 AMARG when notified an MDS has been eliminated from 309 AMARG inventory and no more are projected to arrive, coordinate with the TO library to obtain instructions for technical publication disposal.

14.47.2.14.7. (Added) Ensure all the 309 AMARG TODA library publications are maintained IAW TO 00-5-1 or NAVAIR 00-25-100, as appropriate, updates are posted within 5 days of receipt and technical publications are current and ready for use or inspection by QPQ, the TODO or any inspector. Ensure any rescinded volumes are clearly marked as rescinded and kept separately from the active technical publications.

14.47.2.14.8. (Added) 309 AMARG ensure all proper annotations are made on the title page of each technical publication such as all supplements, missing pages, typographical errors, index checks and *List of Effective Pages* checks.

14.47.2.14.8.1. (Added) 309 AMARG when annotating the annual index check and page check, either cross out the prior check dates or white them out, to ensure only the current dates are showing.

14.47.2.14.8.2. (Added) 309 AMARG ensure the annual index check, the annual page check and the change page check are clearly identified, do not write the date and initial without indicating what was done on that date.

14.47.2.14.9. (Added) 309 AMARG maintain a file or binder with the following information in order:

14.47.2.14.9.1. (Added) Letter of appointment of the TODA custodian and the alternate.

14.47.2.14.9.2. (Added) TO General course training certificates for the custodian and alternate.

14.47.2.14.9.3. (Added) TO Audit Checklists.

14.47.2.14.9.4. (Added) The last TO audit inspection report.

14.47.2.14.9.5. (Added) The prior TO audit inspection report.

14.47.2.14.9.6. (Added) The Air Force TO account inventory report.

14.47.2.14.9.7. (Added) The NAVAIR Technical Manual account inventory report.

14.47.2.14.9.8. (Added) Army technical publications inventory list.

14.47.2.14.9.9. (Added) Miscellaneous Correspondence.

14.47.2.14.9.10. (Added) 309 AMARG number and label the technical publication binders as follows:

14.47.2.14.9.10.1. (Added) If a technical publication requires more than one binder, label the binders as Book 1 of x (the number of binders used).

14.47.2.14.9.10.2. (Added) If there are multiple copies of one technical publication, label each binder as 12, 12A, 12B (where 12 is the number of the technical publication in the TODA library), etc.

14.47.2.15. (Added) 309 MXSG/OBM GOCO TODO.

NOTE: (Added) This section applies to 309th Maintenance Wing (309 MXW) organizations participating in the GOCO TODO. The GOCO TODO is responsible for ordering, receiving, distributing, and file maintaining TOs in government designated libraries.

14.47.2.15.1. (Added) 309 MXW focal point for the procurement, receipt, and distribution of all publications, and software including digitally available TOs encompassed by the Air Force TO

system including other services technical data needed to support 309 MXW production operations. Complies with paragraphs **14.47.**, **14.47.1.**, **14.47.2.**, **14.47.4.**, **14.47.5.**

14.47.2.15.2. (Added) Acquires and maintains a copy of the current Account Reconciliation Report for TOs and *Computer Program Identification Numbers* (CPIN).

14.47.2.15.3. (Added) Ensures a daily TO distribution list of affected TOs is distributed to the using organizations.

14.47.2.15.4. (Added) Ensures all GOCO TODO personnel receive required TO training commensurate with the job they are performing (GOCO TODO, GOCO TODA, GOCO file clerk) TO training will be documented.

14.47.2.15.5. (Added) Ensures timely updates and management of web ATOMS and/or ETIMS.

14.47.2.15.6. (Added) Ensures TODA provides TO requirement listing to using government organizations minimally annually and as requested.

14.47.2.15.7. (Added) Receives 309 MXW Form 535, *Government Library Technical Order Distribution Requirements*, (See Figure **14.47-1.**) and/or AFTO Form 157, *Computer Program Configuration Item Request*, for TO account updates from using organizations. Receives, 309 MXW Form 536, *Government Technical Order (TO) Library POC Appointment/Change* from using organizations.

14.47.2.15.8. (Added) Ensures documented and submitted discrepancies noted by using government organizations are corrected and if required preventive actions are implemented.

14.47.2.15.9. (Added) Maintains requested (sister service) DoD component publications IAW that services governing directives.

14.47.2.15.10. (Added) Ensures AFTO Form 110, *Technical Order/CPIN Distribution Record* is annotated and maintained.

14.47.2.15.11. (Added) Ensures GOCO TODA and/or GOCO file clerk maintains AFMC Form 202, *Nonconforming Technical Assistance Request*, and Special Handling AFMC Forms SH252, *TO Publication Change Request*, IAW AFMCMAN 21-1 *Air Force Materiel Command Technical Order System Procedures*, Chapter 5.

14.47.2.15.12. (Added) Ensures GOCO TODA and/or GOCO file clerk perform Annual List of Effective Pages (ALEP) check when a listing is provided by the using government organization.

14.47.2.16. (Added) 309 MXSG/OBM GOCO TODA.

14.47.2.16.1. (Added) Requisitions and distributes all required TOs and/or CPIN.

14.47.2.16.2. (Added) Provides a daily TO distribution list of affected TOs to the using organizations.

14.47.2.16.3. (Added) Provides timely updates and management of web-ATOMS and/or ETIMS.

14.47.2.16.4. (Added) Provides TO requirement listings minimally once a year to using government organizations and also as requested.

14.47.2.16.5. (Added) Notifies 309 MXW/QPC when a TO is identified to be rescinded. 309 MXW/QPC will notify the government TO library POC for all TOs identified to be rescinded.

Figure 14.47-1. (Added) 309 MXW Form 535, *Government Library Technical Order Distribution Requirements*.

Government Library Technical Order Distribution Requirements									
1. Name (Last, First, Middle Initial)			2. Office Symbol			3. Date (DDMMYYYY)		Page __ of __	
Government Representative Signature:									
TODA File#:			Affected File Sub-Accounts (TODS)						
TO/TCTO/Computer Program Ident Number		Qty Rqd .	Change or Distribution Action Required					Action Comment	
			Sub - Acct Qty						
			Sub - Acct Qty						
			Sub - Acct Qty						
			Sub - Acct Qty						
			Sub - Acct Qty						
			Sub - Acct Qty						
			Sub - Acct Qty						

		Sub - Acct Qty						
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		Sub - Acct Qty						

309 MXW Form 535, 20071212
IMT 535, 20040623, V1

Replaces HILL AFB

14.47.2.16.6. (Added) Filing and Posting Technical Data Changes. GOCO TODA and/or GOCO file clerk will file and maintain all associated TO increments IAW TO 00-5-1 to include AFMC Form 202, Special Handling AFMC Forms 252 (SH252), IAW AFMCMAN 21-1 Chapter 5. The GOCO TODO will provide a daily distribution list of TO increment updates to using organizations. The using government organizations are responsible for reviewing the GOCO TODO provided daily distribution listing for potential workload impacts.

14.47.2.17. (Added) 309 MXSG/OBM GOCO File Clerk.

14.47.2.17.1. (Added) Creates new TO accounts/sub-accounts in a government designated area. When a new TO has all applicable increments (supplements, changes, TOPS, ITPS etc.) received and posted, the TO will be released to maintenance.

14.47.2.17.2. (Added) Uses AFTO Form 110, for control, currency, and to identify listing of TOs on hand and on order. AFTO Form 110 will be annotated and maintained.

14.47.2.17.3. (Added) Replaces missing/shop-worn pages and binders in bad condition when found or brought to their attention by the government.

14.47.2.17.4. (Added) Contacts Government TO Library POC if a TO is missing and/or TOs are not returned on time to ensure timely updates of TOs IAW TO 00-5-1. If the government TO library POC can't be determined the 309 MXW/QPC will be contacted for assistance.

14.47.2.17.5. (Added) Contact GOCO TODO when there is a question about a TO and/or TO increment. For example, removal of special handling AFMC Form 252, annotating paragraphs affected by a supplement, AFMC Form 202, SH252, pulling rescinded TOs etc.

14.47.2.17.6. (Added) Performs TO library ALEP inspections when a listing is provided by the using government organization.

14.47.2.17.7. (Added) Posts and removes AFMC Form 202, and special handling AFMC Forms 252, IAW AFMCMAN 21-1 Chapter 5.

14.47.2.17.8. (Added) Receives locally developed training as required for current position.

14.47.2.18. (Added) Government organizations participating in GOCO TODO services.

14.47.2.18.1. (Added) Ensures main and sub-account TO libraries have a primary and alternate government TO library POCs appointed using the 309 MXW Form 536. Route 309 MXW Form 536 to 309 MXSG-mission support organization (309 MXSG/OBM). A copy of this Form will be maintained in the Government TO library POC binder. (See **Table 14.47-1.** and **Figure 14.47-2.**)

Table 14.47-1. (Added) Completion 309 MXW Form 536, *Government Technical Order (..) Library POC Appointment/Change.*

Block	Completion Requirements
1. TODA File #	Enter “main” TO library number. For example enter 14 for the “main” library.
2. Sub-Account (TODS)	Enter sub-account number. For example if the main file is 14 in block 1 and the sub-account is 12, enter 12 to identify the sub-account
3. Office Symbol	Enter group, squadron, and office symbol of both the alternate and primary POCs. For example 309 EMXG, 527 EMXS/MXDCAC
4. Building Number	The actual building number where the TO library is located.
5. Date	This is the date of appointment
6. Organizational Area/Shop Name	Workload TO file supports. For example, power systems, gearbox, F-16 CCIP, Falcon Star, etc
7. Action Required	Describe what is being done. For example, changing POCs, deleting a file etc.
8a. Account Responsibility (Primary)	Name of “primary” appointee.
8b. Grade	Grade of “primary” appointee
8c. Security Clearance	Security clearance of “primary” appointee
8d. Phone Number	Phone number of “primary” appointee
8e. Signature	Signature of “primary” appointee
9a. Name	Name of “alternate” appointee
9b. Grade	Grade of “alternate” appointee
9c. Security Clearance	Security clearance of “alternate” appointee
9d. Phone Number	Phone number of “alternate” appointee
9e. Signature	Signature of “alternate” appointee
10. Supervisor Name	Printed name of supervisor
Supervisor Signature	Signature of supervisor
Telephone Number	Supervisors phone number
Date	Date supervisor signs form
11. Additional Information	Any other required information on the appointment or TO file
12. File Location	Exactly where the TO file is located in the work center

13. File Location	Additional information on sub-account locations
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Figure 14.47-2. (Added) 309 MXW Form 536, *Government Technical Order (TO) Library POC Appointment/Change.*

Government Technical Order (TO) Library POC Appointment/Change				
1. TODA File#:	2. Sub-Account (TODS):	3. Office Symbol	4. Building	5. Date (DDMMYYYY)
6. Organizational Area/Shop Name				
7. Action Required:				
8. Account Responsibility (Primary)			9. Account Responsibility (Alternate)	
a. Name			a. Name	
b. Grade			b. Grade	
c. Security Clearance			c. Security Clearance	
d. Telephone Number			d. Telephone Number	
e. Signature			e. Signature	
10. Supervisor Name		Supervisor Signature		Telephone Number
				Date
11. Additional Information				

12. File Location	13. File Location

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Replaces HILL AFB

14.47.2.18.2. (Added) Ensures appointed main and sub-account primary and alternate government TO library POCs receive government TO library POC Training AFMC Course # MHPOPS0002649SU Hill AFB Course # 2649 within 90 days of appointment. Completed training will be documented in the TSS and if applicable, annotated in Section II of the employees PAC record.

14.47.2.18.3. (Added) Ensures designated Government TO library POC determines 1) RCC mission-essential TOs, 2) RCC ALEP requirements, 3) Sub-account requirements, 4) Retention of paper or conversion to digital TOs. When the government TO Library POC lacks specific knowledge on RCC workloads and/or equipment the responsible production RCC will provide assistance in determining TO library requirements.

14.47.2.18.4. (Added) Ensures the TO charge out system procedures identified in **14.47.7.** and supporting sub-paragraphs are enforced. This charge out system also applies to commercial off-the-shelf (COTS) manuals.

14.47.2.18.5. (Added) Ensures TO extracts procedures identified in paragraph **14.47.8.** and supporting sub-paragraphs are enforced.

14.47.2.18.6. (Added) Ensures all appointed main and sub-account primary and alternate government TO library POCs perform and document annual TO library technical order reviews.

14.47.2.18.7. (Added) Ensures main and sub-account primary and alternate government TO library POCs properly identify TOs requiring ALEP inspections. The following will be considered by all 309 MXW organizations including 309 AMARG when identifying TOs for ALEP inspections:

14.47.2.18.7.1. (Added) TOs identified on any type of WCD.

14.47.2.18.7.2. (Added) TOs used during aircraft towing operations.

14.47.2.18.7.3. (Added) TOs that involve critical assembly, installation, inspection, repair, rigging, functional/operational testing, etc., of a munitions, rocket motor, life support system, egress system, aircraft canopy, landing gear, aircraft gearboxes, aircraft engines and components of aircraft engines, aircraft auxiliary power systems, aircraft and missile flight controls, aircraft hydraulic and fuel components, critical aircraft fueling operations, critical hydrazine operations.

14.47.2.18.8. (Added) Ensures the applicable main and sub-account primary and alternate government TO library POCs are contacted and involved in any organizational requirements for additional TO libraries and/or sub-accounts, TOs, CPIN and/or Commercial Maintenance Manuals for any established and new workload including those workloads falling under the Contract Logistics Support Public-Private Partnership concept (i.e. F-22). The organization will ensure the following processes are used for any new and/or additional TO requirements:

14.47.2.18.8.1. (Added) The government TO library POC will route a completed 309 MXW Form 535, (See **Figure 14.47-1.**) or AFTO Form 157, through the 309 MXW/QPC Contract Functional Manager (CFM).

14.47.2.18.8.2. (Added) If additional requirements result in increased costs, the 309 MXW/QPC CFM will forward the request to OO-ALC/PKX Contract Officer (CO) who will request a cost proposal from the contractor. The CO will coordinate cost proposal with the requestor, 309 MXW/QPC and the 309 MXW/QPQ TDPO PM for approval.

14.47.2.18.8.3. (Added) Resource Advisor will submit a fund site to 309 MXW/QPC to have an AF Form 9, *Request for Purchase*, established to request modification of contract. The GOCO TODO will begin workload after receipt of modified contract.

14.47.2.18.9. (Added) Provides adequate areas and working space for contractor GOCO TODO file clerk IAW Performance Based Work Statement (PBWS).

14.47.2.18.10. (Added) Ensures a COTS POC is appointed in writing for the purpose of providing oversight ensuring proper management, tracking, and controlling of COTS manuals required by any RCC within the organization. The level of management for this POC is at group discretion. Additionally, each RCC maintaining COTS manuals will assign a RCC POC see paragraph **14.47.18.5.** for the RCC COTS POC duties and responsibilities.

14.47.2.19. (Added) Government TO library POC:

14.47.2.19.1. (Added) Appointed using 309 MXW Form 536. (See **Table 14.47-1.** and **Figure 14.47-2** for 309 MXW Form 536 completion requirements). Maintains 309 MXW Form 536 in POC binder for main and sub-account TO libraries.

14.47.2.19.2. (Added) Main and sub-account primary and alternate will complete government TO library POC training, AFMC Course # MHPOPS0002649SU Hill AFB Course # 2649 within 90 days of appointment. Completed training will be documented in the TSS and if applicable, entered in Section II of the employees PAC record.

14.47.2.19.3. (Added) Performs and documents on GOCO TODO provided requirement listing completion of an annual TO library TO review.” Ensures assigned sub-account POCs perform and document annual TO Reviews on provided requirement listing. Maintains documented TO review in the main POC binder. See **Figure 14-47-3.,** Sample ALEP Identification and Technical Order Review Completion.

NOTE: (Added) Sub-account POCs are not required to maintain hard copy documentation of annual TO review completions. The “main” TO library POC will maintain all TO library sub-accounts documentation of TO review” completion.

14.47.2.19.4. (Added) Identifies (ALEP) inspections on the GOCO TODO requirements listing and/or similar ALEP listing clearly identifying what TOs require ALEP inspections. This identification can be done by highlighting, shading, annotating etc. onto requirements listing. Ensures assigned sub-account POCs identify ALEP inspections on requirements listing. Ensures each TO library including sub-accounts have a listing of TO ALEP requirements filed at the end of the TO libraries (not in the GOCO TODO AFTO FORM 110 card binder). **Figure 14-47-3.,** Sample ALEP Identification and Technical Order Review Completion. The following will be considered by all 309 MXW organizations including 309 AMARG when identifying TOs for ALEP inspections:

14.47.2.19.4.1. (Added) TOs identified on any type of WCD.

14.47.2.19.4.2. (Added) TOs used during aircraft towing operations.

14.47.2.19.4.3. (Added) TOs involving critical assembly, installation, inspection, repair, rigging, functional/operational testing, etc., of a munitions, rocket motor, life support system, egress system, aircraft canopy, landing gear, aircraft gearboxes, aircraft engines and components of aircraft engines, aircraft auxiliary power systems, aircraft and missile flight controls, aircraft hydraulic and fuel components, critical aircraft fueling operations, critical hydrazine operations.

Figure 14-47-3. (Added) ALEP Identification and Technical Review Completion.

TO Num	Sub-Acct	ID Qty	Technical Review Comments
00-25-255-1	729	1	
1-1A-14	729	1	
1-1A-8	729	1	Remove paper order 1-1A-8-CD-1 insert Cross Reference TO available at https://opinfo.hill.af.mil/portal/page?_pageid=1299,2009741&_dad=portal&_schema=PORTAL
11-1-26	729	1	Delete from file
11A-1-33	729	1	Remove paper insert Cross Reference TO digitally available https://ammo.hill.af.mil/www/
11A-21-7	729	1	Delete from file
16C1-12-20-2	729	1	TO rescinded delete from file
1F-16A-2-33JG-10-1	729	1	
1F-16A-2-33JG-729-1	729	1	Increase ID QTY from 1 to 2 order 1 copy of this TO
1F-16A-2-34GS-00-1	729	1	
1F-16A-2-34JG-00-1	729	1	Increase ID QTY from 1 to 4 order 3 copies of this TO
1F-16A-2-34JG-10-1	729	1	
2G-GTC95-48	729	1	Delete from file
2G-GTC95-49	729	1	Delete from file
2J-J1-10	729	1	Delete from file
2J-J75-6	729	1	Delete from file
2J-J79-44	729	1	Delete from file
2J-J79-54	729	1	Delete from file
2J-T56-56	729	1	Delete from file
2J-T76-6	729	1	Delete from file
32-1-101	729	1	Remove paper change to 32-1-101-WA-1 insert Cross Reference TO available at https://www.toindex-s.wpafb.af.mil/
32B14-3-1-101	729	1	Remove paper change to 32-1-101-WA-1 insert Cross Reference TO available at https://www.toindex-s.wpafb.af.mil/
4SA6-39-4	729	1	
4T-1-3	729	1	
4W-1-61	729	1	
5A7-3-38-4	729	1	
5A7-3-38-8-1	729	1	
5E6-2-63-3	729	1	
5E6-3-105-3	729	1	

Highlighted TOs are ALEP Identification

ALEP TOs Identified and Technical Review Completed
03 May 2007

Rosy Rinter

14.47.2.19.5. (Added) Ensures 309 MXW Form 535, see **Figure 14.47-1.** is submitted to the GOCO TODA and/or GOCO file clerk for any additions, changes, deletions of TO library requirements. A copy of the 309 MXW Form 535 will be maintained in the government TO library POC binder until all identified actions on the 309 MXW Form 535 is complete.

14.47.2.19.6. (Added) Ensures the TO charge out system procedures identified in paragraph **14.47.1.** and supporting sub-paragraphs are adhered to by personnel removing TOs from a designated main and/or sub-account TO library.

14.47.2.19.7. (Added) Notifies the designated GOCO TODO POC to be added to daily TO distribution listing.

14.47.2.19.8. (Added) Provides a minimum 5 working days notification to the GOCO TODA and/or GOCO file clerk when TO files are being moved to a different location.

14.47.2.19.9. (Added) Notifies GOCO TODA and/or GOCO file clerk of TOs with broken binders, and worn, soiled, or missing pages.

14.47.2.19.10. (Added) Coordinates with affected government organizations the need for reference and rescinded TOs. If there is a need for these TOs, the government TO library POC will ensure these TOs are maintained IAW paragraphs **14.47.12.** and **14.47.13.**

14.47.2.19.11. (Added) Main Government TO Library POC binders will contain the following minimum documentation.

14.47.2.19.11.1. (Added) Completed and legible 309 MXW Form 536 (see **Table 14.47-1.** and **Figure 14.47-2.**).

14.47.2.19.11.2. (Added) Submitted 309 MXW Form 535 (see **Figure 14.47-1.**). This form can be removed when all requested updates have been accomplished by GOCO TODO personnel and verified by the main and/or sub-account primary or alternate government POC.

14.47.2.19.11.3. (Added) Documented T. library annual technical reviews and ALEP identification (see **Figure 14.47-3.**).

14.47.2.19.11.4. (Added) If applicable, completed AFMC Form 310, Lost/Found Item Report.

14.47.2.19.12. (Added) Sub-account TO library binders will contain the following minimum documentation and filed at the end of that specific TO library.

14.47.2.19.12.1. (Added) Completed and legible 309 MXW Form 536.

14.47.2.19.12.2. (Added) Submitted 309 MXW Form 535 (see **Figure 14.47-1.**).

14.47.2.19.12.3. (Added) ATOMS (requirements) listing and/or a signed and dated letter clearly identifying ALEP inspection requirements for TOs in the sub-account library.

14.47.2.20. (Added) 309 MXSG/OBM. Provides GOCO TODO performance evaluation metrics to the 309 MXW/QPQ TDPO PM.

14.47.3.1. (Added) 309 AMARG Local Checklists (LCL) And Local Work Cards (LWC).

14.47.3.1.1. (Added) LCLs and LWCs are authorized when additional inspection requirements are needed or when portions of several technical publications must be combined because of local conditions, such as type of mission and special use.

14.47.3.1.2. (Added) Squadron directors will approve their own LCLs and LWCs.

14.47.3.1.3. (Added) Support squadron personnel will follow TO 00-5-1 if they require LCLs or LWCs. The 309 SPTS Director or a designated representative is the approving authority.

14.47.3.1.4. (Added) LCLs and LWCs have the same control as the basic technical publication.

14.47.3.2. (Added) 309 AMARG primary activity requiring the LCL or LWC will:

14.47.3.2.1. (Added) Type the LCL or LWC with the signature and date blocks for the applicable squadron director, QPQ and QP-SE review, and send to 309 MXW/QPQL TO library for coordination, certification and publication.

14.47.3.2.2. (Added) Assign an identification number and date the LCL and LWC. Do not use the technical publication number as part of the LCL or LWC number. Numbering will consist of the letters LCL or LWC followed by the originator's office symbol and the next sequential number, i.e., LCL-MXDPA-F9-16 is the 16th LCL by MXDPA; LWC-MXDPB-1 is by the 577th Commodities Reclamation Division (577 CRD/MXDPB) Industrial Support Flight AGE and is the first one; LWC-MXDPB-AG-7 is the 7th work card for AGE.

14.47.3.2.3. (Added) Briefly define the operation or procedure. The LCL or LWC items will be in the prescribed performance sequence.

14.47.3.2.4. (Added) Enter the technical publication number above the signature block when referring to technical publications. Enter the technical publication number on each LWC after each line item on the card.

14.47.3.2.5. (Added) Ensure the LCL or LWC is current, adequate and has the required steps. Include all warnings and caution notes as well as the number of the technical publications from which the data was extracted.

NOTE: (Added) 309 AMARG do not deviate from tech pubs without the written approval of the OPR for the technical publication.

14.47.3.2.6. (Added) Supervisors will conduct an annual review of their LCLs and LWCs by reviewing the applicable technical publication. If the technical publication has changed, the LCL or LWC will be redone to reflect the new or changed technical publication. Pen and ink changes or supplements are not permitted; any changes require the LCL or LWC be republished. If LCLs and LWCs are current, the supervisor will annotate the date checked, initial and forward the card to the TO Library.

14.47.3.3. (Added) 309 AMARG/QPQL TO library, on receipt of an LCL or LWC, will:

14.47.3.3.1. (Added) Check the indexes to ensure the content is not already published as a formal technical publication.

14.47.3.3.2. (Added) Send the LCL or LWC to the applicable flight chief, QPQ and QP-SE for review, coordination and signature and then forward to squadron director for certification.

14.47.3.3.3. (Added) Upon certification by squadron director, determine the number of copies required.

14.47.3.3.4. (Added) Distribute copies to the initiator and users and file the master/original.

14.47.3.3.5. (Added) Maintain a current index of all LCLs and LWCs. Annually issue a suspense letter to the originators to review and validate.

14.47.3.3.6. (Added) Enter a remark in the parent or governing technical publication inventory list (i.e., TPL or ATOMS referring to the LCL or LWC). This will flag any receipt of changes or supplements to notify the originator that the LCL/LWC must be reviewed for update because of the change.

14.47.6.1. (Added) Group quality organizations shall perform and document required organizational TO inspections IAW established guidance.

14.47.6.1.1. (Added) Government Quality Assurance Specialist (QAS) identified deficiencies against the GOCO TODO will be entered in the QIMSS and routed to the 309 MXW/QPC Quality Assurance Evaluator (QAE) for corrective and preventive actions.

14.47.6.1.2. (Added) Government QAS identified TO deficiencies against the government will be entered in QIMSS and routed against the applicable organization RCC supervisor and/or government TO Library POC for corrective and preventive actions.

14.47.6.1.3. (Added) Assessment of the 309 MXW/QPQ TDPO Government TO Account Management Checklist, (see **Table 14.47-2.**), requirements will be incorporated into the

309 MXW Oversight Inspection process. Findings will be documented in the MIS (Access Program) used to capture and report results of 309 MXW Oversight Inspections.

14.47.6.2. (Added) 309 MXW/QPC QAE

14.47.6.2.1. (Added) Acts as the liaison between the government using organization and the GOCO TODO contractor to evaluate the contract GOCO TODO function.

14.47.6.2.2. (Added) Performs surveillance ensuring contractor performance is IAW the PWS, appropriate directives, and established policies.

14.47.6.2.3. (Added) Develops and implements monthly surveillance schedules based on statistical sampling techniques identifying items to be inspected IAW the Performance Plan established criteria.

14.47.6.2.4. (Added) Reviews and analyzes monthly surveillance results for negative trends. Submits Contract Discrepancy Report to the contract functional manager for unacceptable contractor performance.

14.47.6.2.5. (Added) Interfaces with 309 MXW/QP resolving AFMC Form 343 Quality Assurance Assessment documented deficiencies identified by 309 MXW QAS.

14.47.6.2.6. (Added) Investigates and resolves customer complaints.

14.47.6.2.7. (Added) Participates in wing-level inspections using LSET TO Account Management checklist.

14.47.6.3. (Added) 309 AMARG TODO will publish an annual inspection schedule and inspect each 309 AMARG TODA ensuring compliance with technical publications governing library maintenance.

14.47.7. (Added) TO Charge Out System. Removed TOs will be returned within a maximum of 5 working days to the library. The following procedures will be used:

14.47.7.1. (Added) 309 MXW organizations will use AF Form 614, *Charge Out Record*, to account for any “TO binder” removed from the vicinity of a TO library. Minimum documentation requirements for the AF Form 614 are as follows: 1) TO binder number, 2) legible name and phone number, 3) date binder removed from library. The completed AF Form 614 will be placed in the same location of the removed TO binder. Once the TO binder is returned, remove the AF Form 614 and line through the information. (See **Figure 14.47-4.**, AF Form 614).

14.47.7.2. (Added) If a TO is required in excess of 5 working days or during a TDY an AF Form 1297, *Temporary Issue Receipt*, will be used and attached to the AF Form 614 and placed in the same location of the removed TO and/or TO binder. Once the TO and/or binder are returned, remove the AF Form 614 and line through the information. Provide the AF Form 1297 to the individual (or destroy), (see **Figure 14.47-5**, AF Form 1297, *Temporary Issue Receipt*).

NOTE: (Added) Any deviation from the above TO charge out procedures will be fully coordinated through the 309 MXW/QPQ Technical Data Program Manager.

Table 14.47-2. (Added) 309 MXW Government TO Account Management Checklist.

Checklist Name	CKLIST	Rating	#	ITEM	Reference	Para	Y E S	N O	Defect Code N/A
Government TO Account Management	309 MXW	MAJOR	1	Has the organization appointed a primary and alternate Government TO Library POC for main and sub-account TO libraries using 309 MXW FORM 536, <i>Government Technical Order (TO) Library POC Appointment/Change?</i>	309 MXW OI 21-101	14.4 7.2.1 9.1			
Government TO Account Management	309 MXW	MAJOR	2	Have government TO library POCs for main and sub-account TO libraries received Government TO Library POC Training AFMC Course # MHPOPS0002649 SU Hill AFB Local # 2649 within 90 days of appointment?	309 MXW OI 21-101	14.4 7.2.1 9.2			
Government TO Account Management	309 MXW	Minor	3	Does the responsible government TO library POC submit a 309 MXW FORM 535 for TO library changes?	309 MXW OI 21-101	14.4 7.2.2 0.5			

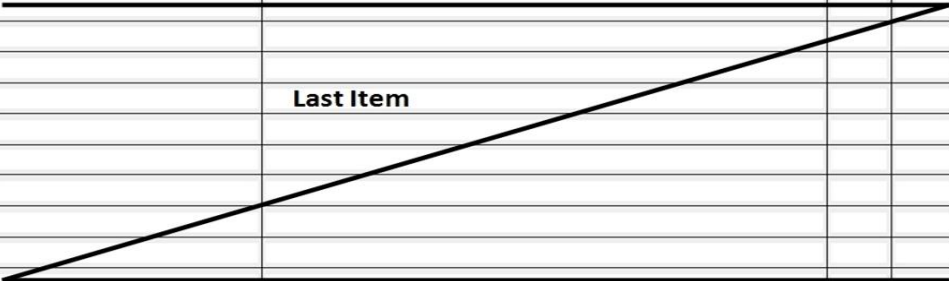
Government TO Account Management	309 MXW	Minor	4	Have government TO library POCs performed and documented an annual technical review on main and sub-account TO libraries ensuring TOs are limited to those required to satisfy mission needs?"	TO 00-5-1	4.4.2 .6.			
Government TO Account Management	309 MXW	MAJOR	5	Have government TO library POCs identified TOs requiring ALEP inspections?	309 MXW OI 21-101 TO 00-5-1	14.4 7.2.2 0.4 5.8.3 .4.			
Government TO Account Management	309 MXW	MAJOR	6	Have government TO library POCs ensured TO reference libraries are properly maintained?	TO 00-5-1	5.1.5			
Government TO Account Management	309 MXW	Minor	7	Have government TO library POCs ensured rescinded TO libraries are properly maintained?	TO 00-5-1	5.1.8			

Figure 14.47-4. (Added) AF Form 614, *Charge Out Record*.

OUT

CHARGE OUT RECORD			
<i>INSTRUCTIONS: File upright when charging out case files or entire folders of correspondence. File on side when charging out individual documents within a folder. File in binder when charging out individual publications, or in place of binder when charging out entire binder.</i>			
DATE OF DOCUMENT(S)	TITLE, FILE CODE OR SUBJECT, NUMBER, OR OTHER IDENTIFICATION	NAME, INITIALS, OFFICE TITLE, OR SYMBOL, TELEPHONE NUMBER	DATE CHARGED OUT
No Entry Req	Binder 22	John Smith , 7-0000	12 April 2007
	12P2-2APG63-2	George Driver	16 April 2007

Figure 14.47-5. (Added) AF Form 1297, *Temporary Issue Receipt*.

OUT				
I acknowledge receipt of and responsibility IAW AFI 23-111 for the items described below and will return them by the return date indicated.				
ISSUED TO: SIGNATURE <i>Rosy Riviter</i>		DUTY PHONE 7-1234	ISSUED BY Ima Boss	
ISSUED TO: NAME, GRADE, ORGN (<i>Type or print</i>) Rosy Riviter WG-10 MXCDPAE		ORGN ACCT NO. MXCDPAE	DATE OF ISSUE 20090306	RETURN DATE 20090406
STOCK NUMBER	DESCRIPTION OF ITEM	U/I	QNTY	
Book 27 TO 9H2-5-232-3	Overhaul with IPB AFT Ramp Actuating Cylinder Assembly	1	1	
 <p>Last Item</p>				

14.47.8. (Added) TO Extracts.

NOTE: (Added) TO extracts are considered organizational property and at no time will a TO or portions of TOs be copied and provided to any “unauthorized” off base contractor, individual, etc. Refer requester to the TO controlling agency identified on the TO title page within the distribution statement.

NOTE: (Added) Highlighting on a TO extract is permissible. What’s not allowed are notes and/or annotating any type of dimension, tolerance, or specification on the extract. Only highlighting of the extract is allowed.

14.47.8.1. (Added) Anyone authorized and able to print T. extracts may print an extract for another authorized individual lacking the ability to do so. The recipient of the extract is responsible for the control and currency of the TO extract IAW paragraph **14.47.8.2.**

14.47.8.2. (Added) Copies (extracts) of TO and pages of TOs are permitted. This includes digital TOs where portions are printed. The following are the requirements for control of TO extracts: The TO title page will be printed, dated and stamped with a maintenance stamp and required pages from the TO will be attached and/or in a binder under the specific TO title page. Personnel not assigned a maintenance stamp will print their first name initial and last name on the TO title page and required pages from that TO will be attached and/or placed in a binder under the TO title page. Extended use extracts will be reviewed for currency minimally every 30 calendar days. If the extract is needed longer than 30 days, line out the old date and write the date of the new check on the TO title page.

14.47.8.3. (Added) Printed TO extract will also contain a required supplement, AFMC Form 202, AFMC Form 252 if it affects the maintenance processes being performed.

14.47.8.4. (Added) Any extract not dated, not stamped, or doesn’t have the printed name of the individual and date on the TO title page is considered an “uncontrolled copy”.

14.47.8.5. (Added) All TO extracts will be disposed of IAW paragraph **14.47.17.**

14.47.8.6. (Added) 309 AMARG Reclamation Removal and Disposal/Demil Work Package Library. IAW TO 00-5-1 these packages are authorized only for 309 AMARG. Technical data extracts used for locating parts and equipment on 309 AMARG aircraft will be marked “FOR REFERENCE ONLY”. 309 AMARG personnel will follow the procedures in paragraph **14.7.8.** and supporting sub-paragraphs when using technical data extracts for maintenance. The extracts must be maintained in MDS-specific work packages. TOs and extracts included in these work packages may not be the most current editions according to the TO catalog, but will be the latest versions applicable to the MDS covered.

14.47.8.6.1. (Added) 309 AMARG, other than Reclamation Removal and Disposal/Demil Work Packages, the remainder of 309 AMARG personnel will follow the procedures in paragraph **14.47.8.** and supporting sub-paragraphs when using technical data extracts for maintenance.

14.47.9. (Added) Engineering Drawings. Anyone authorized and able to print engineering drawings may print a drawing extract for another authorized individual lacking the ability to do so. The recipient of the drawing extract is responsible for the control and currency of the drawing. The recipient of the engineering drawing will stamp and date the top front side of the document. If the recipient of the engineering drawing is not assigned a maintenance stamp they will print their first name initial and last name and date on the top front side of the drawing. The

engineering drawing extract must be re-validated for currency 90 days from the date placed on the drawing. If the drawing extract is needed longer than 90 days, line out the old date and write the date of the new check on the drawing. Engineering drawing extracts will be destroyed and disposed of IAW paragraph **14.47.17**.

14.47.10. (Added) Digital/Web TOs. TO 00-5-1 provides detailed procedures on user responsibilities when downloading a TO from a host website or CD-ROM/DVD. 309 MXW personnel desiring access to digital TOs residing on the Ogden Portal within Information Center and Hill OO-ALC Comprehensive Integrated Technical Order Management System (CITOMS) will complete a DD Form 2875, *System Authorization Access Request*, (SAAR) establishing a user ID and password for both systems (see **Figure 14.47-6A-D.**, Sample DD Form 2875).

NOTE: Use DD Form 2875 dated Aug 2009

14.47.11. (Added) Personnel downloading a digital TO from a host TO repository web site and/or a CD/DVD to a computer hard drive or removable storage device such as data sticks, disks, CDs, etc., becomes responsible for ensuring the downloaded copy of the TO remains current. Downloaded TOs will be reviewed for currency minimally every 30 calendar days. If a paper extract is made from the downloaded version it will be controlled per paragraph **14.47.8.2**.

NOTE: (Added) Personnel desiring more information on how to access digitally available TOs at Tinker and Warner Robins should contact the OPR of this instruction for guidance.

NOTE: (Added) TOs downloaded from authorized repositories are considered organizational property and at no time will a TO or portions of TOs be copied and/or e-mailed to any “unauthorized” off base contractor, individual, etc. Refer the requester to the TO controlling agency identified on the TO title page within the distribution statement.

14.47.12. (Added) Reference Libraries. These libraries are authorized for use by activities whose duties do not include operating or maintaining equipment. TOs. in reference libraries need not be current and will be marked “For Reference Use Only” or equivalent statement.

NOTE: (Added) Libraries used for support of Operation and Maintenance users, for example planning, product improvement, process engineers, facilities engineers, quality assurance, are considered operational libraries and must be current. Copies of TOs used strictly for “workload planning purposes” will be plainly marked “For Reference Use Only” or equivalent statement.

14.47.13. (Added) Training Libraries. These libraries are established to support training courses. TOs used for training must be current, and may be loaned to students for use in the classroom (to be returned after the training). TOs will not be given to students as handouts, although portions of TOs may be reproduced as technical order extracts and plainly marked “For Training Use Only” for student retention if required. All copies to TOs provided to students will be identified as “For Training Use Only.” TOs in training libraries will be marked “For Training Use Only.”

Figure 14.47-6A. (Added) DD Form 2875, System Authorization Access Request (SAAR) Part I.

SYSTEM AUTHORIZATION ACCESS REQUEST (SAAR)		
<p align="center">PRIVACY ACT STATEMENT</p> <p>AUTHORITY: Executive Order 10450, 9397; and Public Law 99-474, the Computer Fraud and Abuse Act.</p> <p>PRINCIPAL PURPOSE: To record names, signatures, and other identifiers for the purpose of validating the trustworthiness of individuals requesting access to Department of Defense (DoD) systems and information. NOTE: Records may be maintained in both electronic and/or paper form.</p> <p>ROUTINE USES: None.</p> <p>DISCLOSURE: Disclosure of this information is voluntary; however, failure to provide the requested information may impede, delay or prevent further processing of this request.</p>		
TYPE OF REQUEST <input checked="" type="checkbox"/> INITIAL <input type="checkbox"/> MODIFICATION <input type="checkbox"/> DEACTIVATE <input type="checkbox"/> USER ID		DATE (YYYYMMDD) 20090921
SYSTEM NAME (Platform or Applications) CITOMS, Infocenter		LOCATION (Physical Location of System)
PART I (To be completed by Requestor)		
1. NAME (Last, First, Middle Initial) Riviter, Rosy		2. ORGANIZATION 309 CMXG
3. OFFICE SYMBOL/DEPARTMENT MXCDPAE		4. PHONE (DSN or Commercial) 777-1234
5. OFFICIAL E-MAIL ADDRESS rosy.riviter@hill.af.mil		6. JOB TITLE AND GRADE/RANK WG-10 3806
7. OFFICIAL MAILING ADDRESS Bldg 507 HAFB, UT		8. CITIZENSHIP <input checked="" type="checkbox"/> US <input type="checkbox"/> FN <input type="checkbox"/> OTHER
9. DESIGNATION OF PERSON <input type="checkbox"/> MILITARY <input checked="" type="checkbox"/> CIVILIAN <input type="checkbox"/> CONTRACTOR		
10. IA TRAINING AND AWARENESS CERTIFICATION REQUIREMENTS (Complete as required for user or functional level access.) <input checked="" type="checkbox"/> I have completed Annual Information Awareness Training. DATE (YYYYMMDD) 20090603		
11. USER SIGNATURE		12. DATE (YYYYMMDD) 20090921

14.47.14. (Added) Rescinded Copies Libraries. Air Force activities may retain rescinded TOs when needed for special programs and projects. Immediately upon notice of TO rescission (“Search New, Updated & Inactive TOs” part of the TO catalog), the copy to be retained will be placed in a rescinded copies library separate from active TOs; and the binder and TO title page will be conspicuously marked “RESCINDED”. If an Air Force activity must obtain a previously rescinded TO, it may be requisitioned from the appropriate program manager or supply chain manager according to TO 00-5-1.

14.47.15. (Added) Lost TO The government TO library POC will be notified when any TO and/or TO binder is missing. For 309 AMARG the appropriate TODA will be notified when any TO and/or TO binder is missing. If the TO can’t be found within 2 hours an AFMC Form 310, Lost/Found Item Report will be initiated by the designated government TO library POC. Follow procedures as required by your organization, the same as reporting a lost item. A copy of the completed AFMC Form 310 will be filed in POC binder. See Attachment 14.47-7., Sample AFMC Form 310, Lost/Found Item report.

14.47.16. (Added) TDY TO Dispatch Kits. If required, groups will establish procedures for controlling and accounting for TOs routinely used during DFT TDYs. See paragraphs **14.47.7.**, **14.47.8.**, and **14.47.11.**

14.47.17. (Added) Disposition of TOs, TCTOs, tapes, cards, checklists, work-cards, engineering drawings, and file documentation.

14.47.17.1. (Added) Personnel disposing of technical data and related TO file documentation including personnel utilizing TO extracts will follow disposition procedures in TO 00-5-1. If the document is classified, destroy IAWIAW DOD 5200.1R, *Information Security Program*, and AFI 31-401, *Information Security Program Management*. CD-ROMS will have both surfaces scratched before recycling.

Figure 14.47-7. (Added) AFMC Form 310, *Lost/Found Item Report*.

LOST/FOUND ITEM REPORT				1. CONTROL NUMBER	
2. NAME OF INDIVIDUAL WHO LOST OR FOUND ITEM (<i>Last, First, MI</i>) Driver, Phillip		3. ORGANIZATION AND SHOP CMXG/MXCDPAE		4. DATE AND TIME LOST 20090921 1530	
5. DESCRIPTION OF LOST/FOUND ITEM AND STOCK NUMBER TO Binder 57 (enter all to numbers that were in binder 57 if known)				6. KIT IDENTIFICATION NUMBER TO file 234-08	
7A. AREA WHERE ITEM WAS LOST Bldg 507		7B. GIVE SERIAL NUMBER OF MAJOR END ITEM (<i>If applicable</i>) NA			
8. STATEMENT OF HOW ITEM WAS LOST OR WHERE FOUND. IDENTIFY ITEM WORKED ON AT TIME OF LOSS BY PART NUMBER/STOCK NUMBER OR SERIAL NUMBER (TMS/MDS/SN). (<i>Use reverse if more space is needed</i>) During end of shift turnover found binder 57 missing from TO file 234-08. <i>Binder 57 Found in Quality 22 Sept 09</i>					
9. SIGNATURE OF INDIVIDUAL WHO LOST OR FOUND ITEM <i>Phillip Driver</i>			10. SUPERVISOR'S NAME/DATE AND TIME NOTIFIED Ima Boss		
11. REPLACEMENT TOOL AUTHORIZED/OPTION AT THIS POINT OR FOLLOWING COMPLETION OF REPORT					
A. SUPERVISOR'S SIGNATURE <i>Ima Boss</i>		B. DATE 20090921	C. PHONE 7-1234	D. OFFICE SYMBOL MXCDPA	E. ISSUED BY NA
F. DATE 20090921					
12. DESCRIBE EFFORTS TO FIND LOST ITEM OR WHERE FOUND ITEM ORIGINATED (<i>Attach all support documents required i.e., checklist, logic tree, Use reverse side if more space is needed</i>) Started search at 1545 and search terminated at 1700 hours. Looked on all work benches, break rooms, trash cans, outside dumpster, TO file clerk, supervisor and planning work areas. TO not located. Will notify primary and alternate Government TO Library POC in the AM to start process to order replacement TOs required for binder 57. <i>BINDER 57 Found in Quality ON QAS DECK 22 SEPT 09</i>					
13. TIME AND DATE SEARCHED STARTED 1545 20090921			14. TIME AND DATE SEARCH TERMINATED 1700 20090921		
15. SEARCH CONDUCTED BY (<i>List primary individual(s)</i>)					
Rosy Riviter			Phillip Driver		
Ima Boss			Dipsev Diver		
16. WAS ITEM FOUND <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO					
A. IF FOUND, GIVE LOCATION AND DATE <i>Quality OFFICE 22SEPT 09</i>			B. IF NOT, WAS ITEM THE RESULT OF NEGLIGENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
17. COORDINATION					
A. SIGNATURE AND TITLE OF AUTHORIZED OFFICIAL <i>Rep Rader</i>				DATE AND TIME 20090921 1700	
B. SIGNATURE AND TITLE OF AUTHORIZED OFFICIAL				DATE AND TIME	
C. SIGNATURE AND TITLE OF AUTHORIZED OFFICIAL				DATE AND TIME	
18. AUTHORIZATION TO DISCONTINUE SEARCH AND RELEASE END ITEM					
SIGNATURE AND TITLE OF AUTHORIZED INDIVIDUAL <i>Shad Rader</i>				DATE AND TIME RELEASED 20090921 1730	

AFMC IMT 310, 20010226, V2

PREVIOUS EDITION IS OBSOLETE

14.47.17.2. (Added) 309 AMARG TODO reviews a list of aircraft stored at 309 AMARG to see if any MDS aircraft were eliminated from the 309 AMARG inventory and will:

14.47.17.2.1. (Added) TODO will review and purge libraries of unneeded classified publications and authenticate their destruction. Coordinate with the 309 AMARG Security Officer to destruct properly.

14.47.17.2.2. (Added) TODO will contact the 578th Storage and Disposal Squadron to find out if more MDS aircraft are projected to arrive at 309 AMARG within 6 months.

14.47.17.2.3. (Added) TODO coordinates with the 309 AMARG/QPQ, 309 AMARG Safety Compliance Office (309 AMARG/QP-SE) and the disposal flight (309 AMARG/MXDPB) Aircraft Disposition to request authorization to dispose of the excess technical publications. Contact the Air Force Museum at Wright-Patterson AFB to see if they need the AF TOs.

14.47.17.2.4. (Added) TODO will dispose or destroy technical publications IAW the appropriate service directives and authorization from 309 AMARG/MXDPB. Also ship Air Force TOs to the Air Force Museum if they request them. If the technical publication distribution statement indicates unlimited distribution, the technical publication may be made available to other museums or other institutions.

14.47.17.2.5. (Added) TODO will destroy publications no longer needed.

NOTE: (Added) 309 AMARG no technical publications with restricted distribution as described on the title page will be released to non-DoD activities unless specific authorization is given by the responsible Technical Order Management Agency.

14.47.17.2.6. (Added) Maintenance processes chiefs of operations support branches/shops/ crews will review their technical publications libraries and coordinate with the TODO for disposition of unneeded technical publications. Technical publications required for radiation safety and demilitarization or hazardous materials programs will be retained and maintained by the TO Library until the programs are or aircraft eliminated.

14.47.18. (Added) COTS: COTS manuals may require TO numbering assignment IAW TO 00-5-18, *USAF Technical Order Numbering System*. This TO describes procedures and techniques employed to assign TO numbers to technical data used to operate, install, maintain, inspect, perform procedural functions on, and modify Air Force weapons systems and equipment.

14.47.18.1. (Added) If TO number assignment is unknown, search via internet: <https://www.toindex-s.wpafb.af.mil/>. Utilizing the TO-Equipment Cross Reference tool; research part number, model number or nomenclature for any technical data that might already be approved and available to order initial distribution through the GOCO TODO.

14.47.18.2. (Added) When a COTS manual meets the criteria in TO 00-5-18 and a TO number needs to be assigned, the designated COTS POC is responsible for getting this manual added to the Air Force inventory. This person will provide a copy of the COTS manual and other pertinent information to the appropriate Technical Order Management Agency (TOMA). As a backup, the COTS POC will make a copy of all information sent to the TOMA for records to show compliance. The TOMA will forward this manual to an Equipment Specialist (ES) to be evaluated IAWIAW MIL-HDBK-1221, *DoD for Evaluation of COTS Manuals*.

14.47.18.3. (Added) Once the ES has approved the COTS manual for addition to the Air Force TO inventory, the TOMA will requisition a TO number through the Joint Computer-aided Acquisition and Logistics Support System (OPR: Oklahoma Air Logistics Center (OC-ALC)).

NOTE: (Added) See section 2 for more specifics on requirements for a group COTS and RCC COTS POCs.

14.47.18.5. (Added) RCC COTS POC.

NOTE: (Added) A manual for machinery and equipment if centrally acquired is required to be reviewed and approved for use IAWIAW TO 00-5-3. If approved for use, a TO number will be assigned and the manual managed, referenced and used like any other TO. It is not the purpose of this instruction to have POCs validate TOs for TO number assignment, only to determine if manuals in their possession for centrally acquired equipment have a current TO number assigned.

14.47.18.5.1. (Added) Ensures once a TO number is assigned; the appropriate government TO library POC is notified of the new TO requirement. The government TO library POC will submit the required paperwork to the GOCO TODO personnel requesting the TO be requisitioned and maintained. See paragraph **2.5.8**.

14.47.18.5.2. (Added) Determines if a TO number is assigned to all centrally acquired equipment manuals maintained by the RCC. If the manual has a TO number assigned, turn the manual over to the Government TO Library POC so this POC can notify the appropriate GOCO TODO personnel to add the TO to the library and update TO records. See paragraph **2.5.8**.

14.47.18.5.3. (Added) Establishes and maintains a COTS library for those manuals that do not require a TO number. Location of the library will be locally determined; however, every effort should be made to locate the library in close proximity to existing TO libraries so there is no question as to the availability of the manuals. The COTS library must be accessible to all who use the equipment. The library will have a “technical review” at least annually ensuring the need for each manual still exists and the correct manual is on file for equipment possessed. To aid in the “technical review,” a master COTS manual listing will be developed and maintained in the COTS library. At a minimum the listing will contain the following elements; manufacturer, nomenclature, model/part number and equipment supported.

14.47.18.5.4. (Added) Ensures COTS manuals are numbered to maintain positive control and filed in numerical and/or alphabetical sequence. Numbering will be locally determined and will be consistent throughout the group.

14.47.18.5.6. (Added) Ensures the charge out system identified within paragraph **1.3** of this instruction is enforced and used to account for all COTS manuals removed from the COTS library. COTS manuals will be returned within 5 working days or at the request of the COTS POC.

14.47.18.5.7. (Added) Recommends development of AFMC Form 561, *Process Order*, to establish procedures for equipment operations where COTS manuals are not available or inadequate IAW AFI 21-101 AFMC Sup 1, Chapter 19.

14.48.3.3.1. (Added) 309 AMARG QP/FT personnel will collect and report the required Functional Check Flight (FCF) following discrepancy data into 576 AMRS database. At a minimum, this information will include: Number of FCF flights per aircraft; number of aircraft

released; number of FCF attempts; unpredictable discrepancies found once aircraft has entered post dock area; including: Work Unit Code (WUC); When Discovered Code ; and How Malfunction Code . Other information may be required to fully populate the database in order to provide metrics for trend analysis.

14.48.3.3.2. (Added) 309 AMARG FCFs will be coordinated and confirmed by the 576 AMRS Master Scheduler. The 576 AMRS Master Scheduler coordinates the requirements with maintenance and flight test to compile the annual, quarterly, and weekly schedule. All changes to the flying schedule will be coordinated as detailed above. The flying schedule requires approval of the 576 AMRS Director; it will be produced electronically and made available to all other agencies.

14.48.3.3.3. (Added) 309 AMARG 576 AMRS Master Scheduler, in conjunction with flight test, will develop the weekly schedule of all flying maintenance activities to include scheduled and unscheduled maintenance, modification programs, and changing priorities not later than (NLT) 1200 Friday prior to execution. 576 AMRS will indicate on the weekly schedule the results of the flights scheduled and added for the week, whether they were effective/released or not and what, if any, discrepancies were found.

14.51.7. (Added) Terms Explained: For the intent of this section, TMDE shall be defined as those devices used to maintain, evaluate, measure, calibrate, test, inspect, diagnose, or otherwise examine materials, supplies, equipment, and identify or isolate actual/potential malfunction or used to determine if they meet operational specifications established in technical documents.

14.51.8. (Added) Responsibilities: 309 MXW group leadership, in conjunction with the 18th Fighter Wing shall ensure local risk analysis/recall procedures are developed, coordinated, published, and maintained for AFMC, 309 MXW/EMXG operation accomplished at Kadena Air Base.

14.51.8.1. (Added) 527 EMXS PMEL will assure Out of Tolerance/Risk Assessment (OOT/RA) is e-mailed to owning TMDE coordinator and 309 MXW/QPQ.

14.51.9. (Added) 309 MXW TMDE Monitors shall:

14.51.9.1. (Added) Forward the OOT/RA letter to the appropriate TMDE owning supervisor within 1 working day. Include applicable correspondence from PMEL. If TMDE is used on multiple weapon systems and/or components, the TMDE monitor shall initiate an e-mail to all production TMDE owning supervisors. **NOTE:** The TMDE monitor shall populate the suspense date on the TMDE Risk Assessment letter.

14.51.9.2. (Added) Letter for Not Repairable This Station Disposition of TMDE.

14.51.9.3. (Added) Letter for Notification of TMDE Out-of-Tolerance Condition.

14.51.9.4. (Added) Letter for Recall of TMDE

NOTE: (Added) The e-mail shall contain the TMDE part number, FEMS number, serial number, manufacturer's name, nomenclature, location, description of the discrepancy identified by PMEL, and reference this instruction.

14.51.10. (Added) 309 MXW TMDE owning supervisor shall:

14.51.10.1. (Added) Within 1 working day after receipt of the risk assessment e-mail, assign a responsible and knowledgeable individual to perform the risk assessment. The risk assessment

shall have a suspense of not more than 7 working days from date of receipt. Individuals performing the risk assessment shall:

14.51.10.2. (Added) Use all avenues available; i.e., practical knowledge/experience, technical order (TO) requirements, engineering assistance, and information provided by the PMEL certifier, to determine if the out-of-tolerance condition of the TMDE had an adverse effect on the quality and/or created an unsafe condition.

NOTE: (Added) If additional information/clarification is required, the individual performing the risk assessment shall contact the 527 EMXS Quality Office for assistance.

14.51.10.3. (Added) The responsible individual shall return the completed risk assessment form to the TMDE owning supervisor.

14.51.10.4. (Added) Upon receipt, review the completed risk assessment package. If there is no compromise to quality or safety and the TMDE owning supervisor agrees with the risk assessment, he/she shall send/forward the risk assessment response to 309 MXW/QPQ. If the TMDE owning supervisor does not agree with the risk assessment results, he/she shall discuss the reasoning for non-concurrence with the individual/s involved. When satisfied with the results, he/she shall document concurrence as previously stated. **NOTE:** It is the TMDE owning supervisors responsibility to ensure the risk assessment is completed and returned within 7 working days from date of receipt to /QPQ by email.

14.51.11. (Added) 309 MXW Management shall: Initiate and develop recall procedures if the risk assessment concludes that the out-of-tolerance TMDE affected the quality of the product. Recall procedures shall include, but not be limited to, letters/messages to using activities, screening of supply stock, re-inspection of products in work, contact (telephone, e-mail, etc.) with the system program director for additional guidance, etc. Copies of all correspondence shall be attached to the risk assessment package to document all action taken. **NOTE:** In the event the risk assessment and/or recall action affects multiple weapon systems and/or components, the results shall be reviewed and/or coordinated by all TMDE owning supervisors involved. Coordination will be documented by e-mail correspondence between supervisors and TMDE monitor. The TMDE owning supervisor may keep copies of all correspondence with the risk assessment package.

14.51.12. (Added) 309 MXW Quality Shall: Maintain a file of all completed risk assessment packages (letters, e-mail copies and supporting documents etc.) IAW AFRIMS T21-11 R28.00. Filing method will be determined by the 309 MXW quality office. However, the files must be available upon request and maintained in an auditable manner.

14.51.13. (Added) 309 AMARG Handling And Transportation Of TMDE.

14.51.13.1. (Added) 309 AMARG Responsibilities and Procedures.

14.51.13.1.1. (Added) Branch chiefs will assign a primary and an alternate TMDE monitor from each RCC. They will update letters of appointment annually or as changes occur, and send to 576 AMRS/MXDPED who will forward a copy to the 355th Component Maintenance Squadron, TMDE Flight (355 CMS/MXMD).

14.51.13.1.2. (Added) 309 AMARG General Procedures for CAT 2 and CAT 3 TMDE.

14.51.13.1.2.1. (Added) Prior to procuring any TMDE equipment, the RCC equipment custodian will coordinate the requisition through 576 AMRS/MXDPED and the TMDE laboratory.

14.51.13.1.2.2. (Added) 309 AMARG RCC TMDE monitor will:

14.51.13.1.2.2.1. (Added) On receipt of new TMDE and prior to initial use, coordinate with 576 AMRS/MXDPED to ensure calibration requirements are met to comply with the applicable maintenance technical data. See TOs 00-20-1, 00-20-14 and 33K-1-100-CD-1; and NAVAIR 17-35MTL-1, *Metrology Requirements List (METRL)*. Each RCC TMDE monitor, 309 AMARG/MXDPBD TMDE monitor, and the 355 CMS/MXMD PMEL will jointly determine, IAW TO 00-20-14, those TMDE items that must be sent off base for commercial calibration. Coordinate with 355th Contracting Squadron, Base Acquisition Flight (355 CONS/MSCB) to determine if annual or less frequent calibration may be done on the RCC TMDE monitors' Government Purchase Card or if more frequent calibrations warrant an annual contract.

14.51.13.1.2.2.2. (Added) IAW TO 00-20-1, use AFTO Form 244, or computer generated Forms. The AFTO Form 244 may be used as follows:

14.51.13.1.2.2.2.1. (Added) If the TO directs visual inspections for prior to use, or for daily, weekly or monthly inspections.

14.51.13.1.2.2.2.2. (Added) For equipment with known failures between required inspections by 309 AMARG/MXDPBD or the TMDE Laboratory.

14.51.13.1.2.2.2.3. (Added) 309 AMARG equipment that requires periodic servicing such as oil changes, air/nitrogen, etc.

14.51.13.1.2.2.3. (Added) 309 AMARG; if TMDE (Navy or Army items) are not listed in the applicable calibration TO, submit an AFTO Form 45, *Request for Calibration Responsibility Determination*, to MABFB to request a calibration determination. 309 AMARG/MXDPBD will forward the AFTO Form 45 to 355 CMS/MXMD. The RCC TMDE monitor may be required to submit applicable equipment TOs.

14.51.13.1.2.2.4. (Added) 309 AMARG ensure that newly arrived items are scheduled for CAT 2 or CAT 3 calibration or inspection within 30 days after arrival.

14.51.13.1.2.2.5. (Added) 309 AMARG determine how critical are measuring devices that are not listed for calibration in TOs by considering how the device is used, i.e., is it an accessory to a measuring device? With 309 AMARG/MXDPBD assistance the owner and user have to establish the most definitive method; for example, a primary gauge used to service a system to a specific pressure and within a particular tolerance, would be critical and require calibration.

14.51.13.1.2.2.6. (Added) 309 AMARG before sending TMDE to 576 AMRS/MXDPED, ensure TMDE meets the condition listed in TOs 00-20-14, Section III and in TO 33-1-27, *Logistic Support Of Precision Measurement Equipment*, 6625 *Electrical and Electronic Properties Measuring and Testing Instruments*, 6630 *Chemical Composition Determining Instruments*, 6635 *Physical Properties Testing Equipment*, 6640 *Laboratory Equipment and Supplies*, 6645 *Time Measuring Instruments*, 6650 *Optical Instruments*, 6655 *Geophysical and Astronomical Instruments*, 6670 *Scales and Balances*, 6675 *Drafting, Surveying and Mapping*

Instruments, 6680 Liquid and Gas Flow, Liquid Level, and Mechanical Measuring. Also, as a minimum perform the following:

14.51.13.1.2.2.6.1. (Added) Brush off dust and dirt and clean any oil and grease from the item.

14.51.13.1.2.2.6.2. (Added) Place protective plastic caps on any exposed connectors and install plugs or caps to protect threads.

14.51.13.1.2.2.6.3. (Added) Secure all loose cabling to prevent damage.

NOTE: (Added) DO NOT use pressure sensitive tape on TMDE.

14.51.13.1.2.2.6.4. (Added) Clean all gauges used on oxygen and oil-free nitrogen systems and place in individual plastic bags IAW TO 37C11-1-1, *Maintenance Instruction - Cleaning of Pressure Gages Used on Liquid Oxygen Systems*, and annotate this compliance on AFTO Form 350, *Reparable Item Processing Tag*.

14.51.13.1.2.2.6.5. (Added) If the TMDE items have batteries, inspect the batteries for corrosion and ensure they are serviceable.

14.51.13.1.2.2.6.6. (Added) CAT 3 pressure gauges - drain oil or hydraulic fluid from bourdon element.

14.51.13.1.2.2.6.7. (Added) Bag all gauges in plastic and cap all connectors.

14.51.13.1.2.2.6.8. (Added) Plug-in type electronic TMDE must be bagged (plastic) and connectors capped.

14.51.13.1.2.2.6.9. (Added) Attach an AFTO Form 350 or a similar computer generated form with a complete inventory of accessories listed in AFTO Form 350 block 14 or the appropriate space on the computer form to TMDE with ancillary equipment such as probes, shunts, plug-ins, etc. Accessories not required for the calibration need not be delivered to TMDE scheduling.

14.51.13.1.2.3. (Added) 309 AMARG/MXDPBD will:

14.51.13.1.2.3.1. (Added) Monitor all incoming TMDE.

14.51.13.1.2.3.2. (Added) Ensure TMDE calibration forms are filled out IAW TO 00-20-14.

14.51.13.1.2.3.3. (Added) Sign and issue Part II of the AFTO Form 350 or sign the signature block on the computer form and give to the RCC as receipt for the equipment.

14.51.13.1.3. (Added) 309 AMARG Scheduled Maintenance.

14.51.13.1.3.1. (Added) IAW TO 00-20-14 the 355 CMS/MXMD will provide the following computer products to the RCC, showing the TMDE scheduled maintenance information:

14.51.13.1.3.1.1. (Added) 309 AMARG TMDE Master ID listing:

14.51.13.1.3.1.1.1. (Added) IAW PMEL Automated Management Subsystem (PAMS), PAMS Implementation Conversion will assign and control ID numbers for all equipment processed through the 355 CMS/MXMD.

14.51.13.1.3.1.1.2. (Added) All changes to the TMDE Master ID list will be submitted to ?/MABFB who will submit to TMDE scheduling. This is necessary to give the scheduling personnel control over all changes, additions, and deletions against the TMDE Master ID listing.

14.51.13.1.3.1.1.3. (Added) TMDE scheduling will review all PAMS correction sheets for validity and then enter into PAMS.

14.51.13.1.3.1.1.4. (Added) TMDE scheduling controls and prints all TMDE CAT 3 machine products.

14.51.13.1.3.1.2. (Added) 309 AMARG Monthly Equipment 90-day Forecast Schedule:

14.51.13.1.3.1.2.1. (Added) The monthly schedule will be available on the first duty day following the 22nd of each month, and will be forwarded to the TMDE monitor through ?/MABFB.

14.51.13.1.3.1.2.2. (Added) 309 AMARG/MXDPBD will ensure the required actions are taken by the RCC upon receipt of the monthly schedule, e.g., accuracy of ID, part, serial numbers, NSN, due dates, etc.

14.51.13.1.3.1.3. (Added) 309 AMARG RCC Master ID listing:

14.51.13.1.3.1.3.1. (Added) The RCC Master ID listing will be available the first duty day following the 6th of the month and will be forwarded to the RCC TMDE monitors through ?/MABFB.

14.51.13.1.3.1.3.2. (Added) The RCC TMDE monitors will take the following actions upon receipt of the master ID listing:

14.51.13.1.3.1.3.2.1. (Added) Verify all information on the listing.

14.51.13.1.3.1.3.2.2. (Added) Make all corrections in red ink.

14.51.13.1.3.1.3.2.3. (Added) Sign the listing and return a copy to 576 AMRS/MXDPBD to arrive no later than the 20th of the month.

14.51.13.1.3.2. (Added) 309 AMARG RCC will:

14.51.13.1.3.2.1. (Added) Fill out a hand receipt for each TMDE item scheduled for routine inspection. TMDE personnel are required to fill out AFTO Form 350, Part I, to note repair or discrepancies.

14.51.13.1.3.2.2. (Added) Retain the signed AFTO Form 350, Part II, or computer form as receipt of equipment routed to TMDE.

14.51.13.1.3.2.3. (Added) At least 1 week before the inspection due date, schedule inspections by filling out an AFTO Form 350 for *on-site calibration* items, and TMDE equipment that is part of a test stand or has to be calibrated while on a rack, cart or other device.

NOTE: (Added) In block 15, enter ON-SITE INSPECTION; include the building number of the TMDE and inspection due date and all the information as shown. Hand-carry the AFTO Form 350 to ?/MABFB.

14.51.13.1.3.2.4. (Added) 309 AMARG/MXDPBD will pick up TMDE items due inspection as follows:

14.51.13.1.3.2.4.1. (Added) No later than 3 workdays before the scheduled due date.

14.51.13.1.3.2.4.2. (Added) On the Friday prior to the inspection due date, if the inspection due date falls on a weekend.

14.51.13.1.3.2.4.3. (Added) Five days prior to inspection due date, if inspection due date falls on a holiday.

14.51.13.1.3.3. (Added) 309 AMARG IAW TO 00-20-14 the 355 CMS/MXMD will send a *Delinquent TMDE Item Inspection* letter to the 309 AMARG Commander for items not received by noon of the third day after inspection due date.

14.51.13.1.3.3.1. (Added) TMDE that is overdue calibration must be removed from service by 2400 hours on the date due calibration (DDC).

14.51.13.1.3.3.2. (Added) IAW TO 00-20-14, a letter requesting an extension may be submitted by the RCC TMDE monitor describing the TMDE involved, the calibration due date, the reason why the calibration cannot be accomplished, and the estimated date calibration action can be initiated. Send approved letter through ?/MABFB to the TMDE Laboratory.

14.51.13.1.3.4. (Added) 309 AMARG, upon receipt of items from the RCC, 576 AMRS/MXDPBD will:

14.51.13.1.3.4.1. (Added) Protect the TMDE with cushioning material, such as foam rubber, bonded rubberized hair, etc., to prevent damage when transporting the TMDE to the TMDE laboratory.

14.51.13.1.3.4.2. (Added) Coordinate with TMDE laboratory on inspection progress, part shortages, etc.

14.51.13.1.3.4.3. (Added) Pick up the TMDE when notified that the inspection is completed.

14.51.13.1.3.4.4. (Added) Deliver the inspected TMDE to the RCC and exchange the hand receipt for the item.

14.51.13.1.3.4.5. (Added) Process delinquent items to the TMDE Laboratory on a priority basis.

14.51.13.1.4. (Added) 309 AMARG Initial Inspection and Unscheduled Requirements.

14.51.13.1.4.1. (Added) The RCC will fill out an AFTO Form 350, attach it to the TMDE and notify 576 AMRS/MXDPBD that TMDE is ready for pickup.

14.51.13.1.4.2. (Added) 309 AMARG/MXDPED will:

14.51.13.1.4.2.1. (Added) Process TMDE unscheduled maintenance requirements to the TMDE laboratory on a priority basis.

14.51.13.1.4.2.2. (Added) Coordinate new TMDE with TMDE scheduling prior to delivery to ensure standards and technical data are on hand at PMEL.

14.51.13.1.5. (Added) 309 AMARG Radiation Detection Equipment (RADIAC) Special Procedures.

14.51.13.1.5.1. (Added) The user will remove batteries from the RADIAC, place in plastic bags, and transport the RADIAC and batteries to 576 AMRS/MXDPBD.

14.51.13.1.5.1.1. (Added) If equipment is in use and the instruments are maintained with the batteries installed, the user will inspect and operationally check applicable TOs at 2-week intervals.

14.51.13.1.5.1.2. (Added) For equipment not in regular use, the user will remove the batteries to prevent damage from leaking batteries, attach AFTO Form 244 and keep a record of inspections.

14.51.13.1.5.2. (Added) 309 AMARG/MXDPBD will check all RADIAC batteries for serviceability. The user will provide serviceable replacements, when required.

14.51.13.1.5.3. (Added) 309 AMARG all RADIAC equipment will be supplied with a calibration date chart such as AFTO Form 249, *TMDE Calibration Data*, or a computer generated equivalent, that shows the final recorded values obtained at all calibration points required on each range of the test instrument.

14.52.4. (Added) Briefing, Review, and Debriefing Functions: Briefings or debriefings will be conducted to ensure aircrews and depot maintenance personnel effectively communicate the status of aircraft condition. Incoming aircrews debrief with preparation for flight forms and records representatives to document any ferry-flight maintenance discrepancies and provide depot personnel the opportunity to clarify aircraft condition prior to acceptance. Prior to FCFs, aircrews review the aircraft AFTO Form 781 book and other depot documents to discuss and clarify aircraft condition and configuration, with the applicable depot maintenance representatives (mechanics). After FCF, aircrews are debriefed to document any ground or air aborts or in-flight discrepancies, thus affording the maintenance crews the opportunity to clarify conditions prior to corrective maintenance. Upon completion of depot maintenance, outgoing aircrews and preparation for flight forms and records representatives conduct a departure briefing to review the current configuration or status of the aircraft prior to departure.

14.52.4.1. (Added) Incoming Debriefing: Upon arrival of an aircraft for depot maintenance, the respective MDS Procedures and Analysis Element (309 AMXG/MXDXAA), or the Schedule Execution Element (309 AMXG/MXDXAB), and aircrew members will conduct a debriefing meeting. Any chronic problems, nonstandard configurations, or in-flight defects will be identified and documented.

14.52.4.1.1. (Added) Upon arrival of an incoming aircraft for depot maintenance, a debriefing meeting will be conducted by a forms and records technician in the Procedures and Analysis Element (309 AMXG/MXDXAA) or, if not available, the preparation for flight debriefer (309 AMXG/MDPADC assigned to prepare for flight) with the aircrew member delivering the aircraft to the depot. Any maintenance problems or write-ups, non-standard configurations, or in-flight (or other) discrepancies shall be identified and documented on the appropriate depot documents and AFTO Form 781A.

14.52.4.2. (Added) Pre-FCF Review: Aircrew will review aircraft records to include AFTO Form 781A, DD Form 365-4, *Weight and Balance Clearance Form F*, and TCTO complied with that might affect the FCF. Engine trim sheets on all engines that were functionally checked and trimmed during depot maintenance will also be provided.

14.52.4.2.1. (Added) Prior to FCF, preparation for flight (309 AMXG/MXDPADC or MXDPABA or MAPACB) and production supervisor for the respective MDS, and the assigned crew chief will review and make available to the FCF aircrews all aircraft associated documentation for review. The preparation for flight/production supervisor and the assigned crew chief shall be available to answer any questions the aircrew may have prior to the FCF.

14.52.4.2.2. (Added) The 514th Flight Test Squadron (514 FLTS) FCF crew will:

14.52.4.2.3. (Added) Review aircraft records to include *Aircraft Flight Report and Maintenance Record* (781 book), DD Form 365-4, *Weight and Balance Clearance Form F*, Transport/Tactical TCTOs, and previously complied with TCTOs that might affect the FCF. Engine trim sheets on

all engines that were functionally checked and trimmed during depot maintenance will also be provided.

14.52.4.3.1. (Added) The appropriate forms and records unit (309 AMXG/MXDXAB) will process the aircraft forms and records prior to FCF or delivery flight.

14.52.4.4. (Added) Departure Briefing: At the conclusion of depot-level maintenance and after successful completion of FCF (if applicable), a departure briefing shall be conducted by the procedures and analysis element (309 AMXG/MDXAA) with outgoing aircrews. During this briefing, aircraft maintenance and/or modification documentation shall be reviewed to ensure the outgoing aircrews understand the current configuration and condition of their aircraft.

14.52.5. (Added) At the conclusion of each flight or ground abort, a debriefing of the aircrew will be accomplished with key personnel from A-10 Prep for Flight, F-16 Prep for Flight (309 AMXG/MXDPADC or 309 AMXG/MXDPABA) or C-130 preparation for flight (309 AMXG/MAFACB) and the Workload Supportability Element (309 AMXG/MDXAC), PAO, aircraft. The assigned debriefing specialist will chair the debriefing. During afterhours it will be chaired by the first-level supervisor from 309 AMXG/MFPADC, 309 AMXG/MXDPAD, and 309 AMXG/MAFACB.

14.52.5.1. (Added) The aircrew will complete the AFTO Form 781A for all discrepancies discovered before and during FCF. The 514 FLTS flight crew will make the appropriate entries on the aircraft AFTO Form 781A symbol (red X, diagonal, or dash) for each discrepancy as determined by them as a safety of flight discrepancy. (Refer to TO 00-20-1.) Each discrepancy will be reviewed with the aircrew by the maintenance personnel to clarify any questions they may have on the discrepancy.

14.52.5.3.1. (Added) The debriefing specialist will chair the debriefing of each FCF or air and ground abort to ensure a thorough debriefing occurs. When the debriefing specialist is not available then the first level for that aircraft will chair the debriefing. The debriefing shall include representatives, when appropriate, from 309 AMXG/MXDPA_A, 309 AMXG/MXDXAC or 309 AMXG/MXDXA, 309 AMXG/MXDXAB, aircrew, and PAO, to review and classify flight write-ups and authorize funding to repair aircraft Safety Of Flight maintenance problems.

14.52.5.3.2. (Added) The debriefing specialist will review and code each discrepancy from the preflight inspection, FCF, and/or air or ground abort with respect to the appropriate -06 TO WUC book, reject code, skill code, location on aircraft, area code for aircraft, and if the fix for the discrepancy is a rework by maintenance or material failure.

14.52.5.3.3. (Added) The debriefing specialist will enter all of the above listed discrepancies into the Programmed Depot Maintenance Scheduling System (PDMSS).

14.52.5.3.4. (Added) The debriefing specialist will look for and track any trends noted in the above discrepancies with regard to material failure and/or rework.

14.52.7.2. (Added) Weekly Schedule Change – Aircraft that are previously scheduled and unable to meet their scheduled line due to maintenance; i.e., fuel leaks, avionics, etc., will be removed from the schedule 24 hours prior. This action will be coordinated between operations and maintenance. Maintenance control will then be notified and the scheduled line will be removed and classified as “*not ready*” on the daily forecast.

14.54.3. (Added) " OO-ALC, 309 MXW geographically separated unit (GSU) operations are exempt from compliance with the requirements of AFI 21-101 AFMC Sup 1, Chapter 14. paragraphs 54., 55. and all attachments that pertain to these paragraphs. This chapter and paragraphs require participation in the PAC program. Exempt GSUs are 581/MMXS Rivet Minuteman Integrated Life Extension (MILE) operations at Malmstrom AFB, MT; Minot AFB,ND; F.E. Warren AFB, WY and 309 MMXG, 581MMXS/MXDPH, Vandenberg AFB, CA.

14.54.3.1. (Added) When a group has internal requirements beyond the scope of this supplement, those requirements will be documented in a group operating instruction.

14.54.4.7.8.1. (Added) Develop and maintain 309 AMARG PACSS identification task codes.

14.54.4.7.8.2. (Added) Manage 309 AMARG group PACSS user access options.

14.54.4.7.8.3. (Added) Maintain a roster of group 309 AMARG special skills qualification (SSQ) qualifying officials and make the roster accessible to 309 AMARG PACS/TSS users.

14.54.4.8.10. (Added) Employees loaned less than 30 days. For employees loaned less than 30 days the supervisor of record will make PACSS records available to the gaining supervisor for certification checks. The supervisor of record maintains responsibility for the employee's certifications.

14.54.4.8.4. (Added) 309 AMARG personnel required to operate forklifts must complete training and evaluations IAW AFOSH STD 91-46, which will be documented in PACSS.

14.54.4.8.4.1. (Added) Update 309 AMARG employee engine run date tracking in PACSS section 2 upon each employee engine run.

14.54.4.8.8. (Added) Ensure 309 AMARG employees review and validate by personnel identification number (PIN) any changes made to the status of their current certifications within 30 days of the change. Employees that are decertified (administratively or for workmanship) in a task must review their PACSS/TSS record and acknowledge the decertification by PIN review within 10 working days of the action.

14.54.4.8.8.1. (Added) Ensure that one 309 AMARG task certified individual member is assigned to certify all phases of the task once completed when teams within a particular skill or work center are required to do a particular task (task accomplished by teams). This individual will certify all work is completed IAW specifications and all work is properly documented in the appropriate work control documents.

14.54.4.8.9. (Added) Notify their squadron/group maintenance training and PACSS manager when an employee is transferred, retired, or terminated.

14.54.4.9.3. (Added) 309 AMARG QA will:

14.54.4.9.3.1. (Added) Document and track PE in PACSS.

14.54.4.9.3.2. (Added) Coordinate the scheduling of PEs with the appropriate supervisor.

14.54.4.9.4. (Added) 309 AMARG Control will:

14.54.4.9.4.1. (Added) Review current engine run certifications prior to validating and authorizing engine run operations and notify appropriate supervisor regarding operators who are not identified as currently certified.

14.54.4.9.4.2. (Added) Document engine runs in the engine run database. Required information includes engine operator's name, type MDS aircraft and engine being run, aircraft and engine serial number being run, date of engine operation and location of operation.

14.54.4.10. (Added) 309 AMARG engine operators will:

14.54.4.10.1. (Added) Report to 309 AMARG Control prior to and at the completion of each engine run, providing operator name, aircraft and engine MDS and serial number for each run.

14.54.5.1.1. (Added) 309 AMARG Reclamation and Disposal Engine Removal PACSS task certification will be MDS specific:

14.54.5.1.1.2. (Added) When prior AC certification is not available, supervisors will review employee history experience and designate an SME in writing to QP and PACSS.

14.54.5.1.1.3. (Added) The supervisor and SME will prepare the working crew using technical data and appropriate safety practices, consulting QP and 576 MXDPBB as needed.

14.54.5.1.1.4. (Added) PACSS certification will be granted upon supervisor satisfaction with OJT completion and proficiency demonstration.

14.54.6. (Added) 309 AMARG employee requirements for initial and refresher training follow similar formats; a single PACSS Section II entry for the training requirement is adequate. Use the original date block to record the initial training date and use the completed date block to record the most recent refresher course date to preclude having two entries in Section II for the same type of training.

14.54.4.7. (Added) All group SSQ worksheets will be retained by the group PAC program manager until it is superseded or is no longer applicable.

14.54.9.1. (Added) 309 AMARG at the discretion of the work center supervisor, use the following conditions in evaluating the need to decertify an employee on a particular PAC task:

14.54.9.1.1. (Added) Failure to maintain the required level of proficiency.

14.54.9.1.2. (Added) Validated customer complaints/feedback of employee task performance.

14.54.9.1.3. (Added) Supervisor observation of inadequate task proficiency.

14.54.9.1.4. (Added) Critical/major defects caused by poor workmanship.

14.54.9.1.5. (Added) Failure to follow technical directives/specifications.

14.54.9.1.6. (Added) Failure to adhere to safety requirements to include using appropriate safety equipment.

14.54.9.1.7. (Added) Failure to satisfy training requirements.

14.54.9.1.8. (Added) Decertify any employee receiving a major defect rating during a task evaluation for that task being evaluated. Refer to 309 AMARG/QA office for a definition of discrepancies which constitute major defects during task evaluations.

14.54.11. (Added) Certifying WCDs. FEMS shall be utilized by Plant Management (309 MXSG/MXRIP) to create a computer generated Work Authorization Document (WAD) for called in problems and scheduled maintenance. Certified employees shall stamp on the "employee work completion" line when the WAD is completed. Prior to closing out the WAD, the supervisor or designated employee will input the certifying employee's information into

FEMS. FEMS shall also be utilized by the PMEL (309 EMXG/MXVT) to generate calibration and/or repair work orders for the scheduling of TMDE. Completed work orders will be “K” stamped by the technician who is certified to perform the work. The completed work order shall be routed to PMEL Production Control for entry into the FEMS data base. Historical tracking of all certifying employees shall be maintained in FEMS.

14.54.11.1. (Added) 309 AMARG personnel who perform aircraft engine inlet/intake inspections as part of the acceptance process in 578 MXDPAC will satisfy Red X procedures by performing a secondary PAC inspection.

14.54.13. (Added) PAC Documentation. Impoundment of the production TSS (PAC/ electronic training record [ETR]) database due to mishaps, formal investigations or direction by higher authority, will be accomplished by notifying (OO-ALC/ITMD) and requesting a snapshot of the TSS (PAC/ETR) database. OO-ALC/ITMD has this data in a shared file which will be available to the center/wing PAC manager.

14.55.2.2.3.1. (Added) The completed SSQ worksheet shall be forwarded to the group PACSS program manager.

14.55.4. (Added) SSQ Requirements. SSQ testing using technical data will be an open book test with exception to emergency procedures or instructions/regulations stating otherwise.

14.55.5.1.2. (Added) 309 AMARG SSQ appointments shall be coordinated through 309 AMARG/QPQA and 309 AMARG/QPSE recommending approval/disapproval for information to the group director.

14.55.9.1.4.3. (Added) 309 AMARG engine run-up qualification procedures may differ depending on aircraft status at 309 AMARG. Training must meet minimum requirements of AFI 11-218, *Aircraft Operation and Movement on the Ground*, and this instruction. 309 AMARG will use other agency engine run-up qualification officials and Course Control Documents (CCD)s provided by the owning branch of service when practical and feasible. When training is provided locally, use classroom instruction, SOJT, applicable CCDs and applicable aircraft TO series -1 and -2.

14.55.9.7.4.1. (Added) Aircraft cabin/cockpit/fuselage pressurization local procedures for training requirements shall be established by individual groups as applicable.

14.55.9.9.4. (Added) At 309 MXW, flight control rigging applies to all aircraft and cruise missiles.

14.55.9.22. (Added) H-70 (Hydrazine) Fuel Spill Management.

14.55.9.22.1. (Added) Regulatory Documents. TO 1F-16()-2-49GS, *Emergency Power System*; TO's 1F-16()-2-49JG-001, *Emergency Power System; Block 50/52*; TO 1F-16()-2-49JG-002, *Emergency Power System*; TO 1F-16()-2-49JG-003, *Emergency Power System*; 42B1-1-18, *Handling of H-70 Fuel*; Water-Hydrazine Fuel, and other applicable directives.

14.55.9.22.2. (Added) Application. Hydrazine Response Team.

14.55.9.22.3. (Added) Qualification. After completion of training, the individual shall be able to demonstrate proficiency through written or oral and practical examinations (simulated) and be able to complete a 25-question written examination test with a minimum score of 85 percent (corrected to 100 percent).

14.55.9.22.4. (Added) Requalification. Annually, or whenever an individual fails to demonstrate adequate proficiency.

14.55.9.22.5. (Added) Disqualification. Observed deficiencies, DRs, failure to maintain the required level of proficiency, or failure to perform the required procedures IAW the applicable technical directives, is grounds for immediate disqualification. Initial SSQ requirements shall be met to be re-qualified.

14.55.9.23. (Added) Portable Milling.

14.55.9.23.1. (Added) Regulatory Documents. TCTO 1947, *341 Bulkhead*, 1910 462/479 *Visual Bulkhead Inspection*, 2034, *Mill 462 and Replace 479 Bulkhead*, 2317, *Modified Wing Assembly*, 2316 *Station 2 Reinforcement*.

14.55.9.23.2. (Added) Application. Individual operates portable milling unit in modification of some areas of the F-16 aircraft.

14.55.9.23.3. (Added) Qualification. After completion of training, the individual shall be able to demonstrate proficiency through oral and practical examinations.

14.55.9.23.4. (Added) Requalification. Annually, or whenever an individual fails to demonstrate adequate proficiency.

14.55.9.23.5. (Added) Disqualification. Observed deficiencies, DRs, failure to maintain the required level of proficiency, or failure to perform the required procedures IAW the applicable technical directives, is grounds for immediate disqualification. Initial SSQ qualification requirements shall be met to be requalified.

14.55.9.24. (Added) Liquid Nitrogen.

14.55.9.24.1. (Added) Regulatory Documents. TO 1F-16 ()-3-1, *Structural Repair*, TO 00-25-172, and AFOSHSTD 91-67, *Liquid Nitrogen and Oxygen Safety*.

14.55.9.24.2. (Added) Application. Personnel who use liquid nitrogen for panel or structural removal on aircraft.

14.55.9.24.3. (Added) Qualification. Granted after successful completion of the required training and a satisfactory proficiency demonstration to a qualification official.

14.55.9.24.4. (Added) Requalification. An annual written proficiency examination and a practical demonstration of proficiency to the qualification official. Shall be able to pass a written test with a minimum score of 80 percent (corrected to 100 percent).

14.55.9.24.5. (Added) Disqualification. Observed deficiencies, DRs, failure to maintain the required level of proficiency, or failure to perform the required procedures IAW the applicable technical directives, is grounds for immediate disqualification. Initial SSQ qualification requirements shall be met to be requalified.

14.55.9.25. (Added) A10 Auxiliary Power Unit (APU).

14.55.9.25.1. (Added) Regulatory Documents. TO 1A-10A-2-4JG-1, *Ground Handling*, TO 1A-10A-2-12G-1, *Servicing*, TO 1A-10A-2-71JG-2, *Power plant/APU Operation and Trim*, AFI 91-202, *The Air Force Mishap Prevention Program*, AFOSHSTD 91-66, *General Industrial Operations*, and AFOSHSTD 91-100, *Aircraft Flight Line-Ground Operations and Activities*.

14.55.9.25.2. (Added) Application. All personnel required to operate APU on aircraft.

14.55.9.25.3. (Added) Qualification. Granted after successful completion of the required training and a satisfactory proficiency demonstration to a qualification official and pass a written test with a minimum score of 85 percent (corrected to 100 percent).

14.55.9.25.4. (Added) Requalification. Every 12 months, demonstrating proficiency to a SSQ official, shall be able to pass a written test with a minimum score of 85 percent (corrected to 100 percent).

14.55.9.25.5. (Added) Disqualification. Observed deficiencies, DRs, failure to maintain the required level of proficiency, or failure to perform the required procedures IAW the applicable technical directives, is grounds for immediate disqualification. Initial SSQ requirements shall be met to be requalified.

14.55.9.26. (Added) Foreign Object Inspection/Maintenance (A10 White Area).

14.55.9.26.1. (Added) Regulatory Documents. TO 1A-10A-2-27MS-1, *Environmental Control System*, TO 1A-10A-3-1, *Structural Repair*, TO 1A-10A-2-27JG-4, *Flight Control, Pitch*, TO 1A-10A-2-27JG-5, *Flight Control, Roll*.

14.55.9.26.2. (Added) Application. Aircraft Mechanics, Aircraft Electricians, and Aircraft Pneudraulics.

14.55.9.26.3. (Added) Qualification. After completion of training, the individual shall demonstrate proficiency through oral and practical examinations and pass a written test with a minimum score of 85 percent (corrected to 100 percent).

14.55.9.26.4. (Added) Requalification. An annual requirement consisting of a demonstration of continued proficiency to a qualification official and the satisfactory passing of the written examination.

14.55.9.26.5. (Added) Disqualification. Failure to maintain the high level of proficiency needed to ensure the safe closure of white area or failure to comply with all published directives applicable to the particular weapon system involved with white area maintenance. Initial SSQ requirements shall be met to be requalified.

14.55.9.27. (Added) Aircrew Life Support.

14.55.9.27.1. (Added) Regulatory Documents. Applicable weapons system TO's, checklists, and job guides, applicable AFOSH standards, and directives.

14.55.9.27.2. (Added) Application. Applies to all personnel assigned to maintain and repair ALS equipment.

14.55.9.27.3. (Added) Qualification. Granted after completion of formal training, and a demonstration of proficiency. Successfully complete a written test, 20 question minimum, with a passing score of 80 percent (corrected to 100 percent).

14.55.9.27.4. (Added) Requalification. An annual requirement consisting of demonstration of continued proficiency to a SSQ official and the successful completion of a written examination, 20 question minimum, with a passing score of 80 percent (corrected to 100 percent).

14.55.9.27.5. (Added) Disqualification. Observed deficiencies, DRs, failure to maintain the required level of proficiency, or failure to perform the required procedures IAW the applicable

technical directives, is grounds for immediate disqualification. Initial SSQ qualification requirements shall be met to be requalified.

14.55.9.28. (Added) Resistance Brazing.

14.55.9.28.1. (Added) Regulatory Documents. TO 00-25-252, *Aeronautical equipment welding*, AFOSHSTD 91-5, *Welding, Cutting, and Brazing*, AFOSHSTD 91-501, *Air Force Consolidated Occupational Safety Standard*, The American Welding Society Handbook, checklists, and directives.

14.55.9.28.2. (Added) Application. Applies to electrical equipment repair technicians who perform resistance brazing on airborne, and ground generators.

14.55.9.28.3. (Added) Qualifications. Shall have completed resistance brazing and soft solder methods training. Granted after complying with all qualification instructions listed in the resistance brazing SSQ guide and checklist. After completion of training the individual shall demonstrate proficiency through oral and practical examinations and pass a written test with a minimum score of 80 percent (corrected to 100 percent).

14.55.9.28.4. (Added) Requalification. Required every 12 months, consisting of a demonstration of continued proficiency to a qualification official and the satisfactory passing of a written examination.

14.55.9.28.5. (Added) Disqualification. Observed deficiencies, DRs, becoming overdue in training requirements, or failure to maintain the required level of proficiency, or failure to perform the required procedures IAW the applicable technical directives can be grounds for immediate disqualification. Initial SSQ qualification requirements shall be met to be requalified.

14.55.9.29. (Added) Hypergolic Fuel Monomethylhydrazine/Nitrogen Tetroxide (MMH/N₂O₄), Leaks and Spills Response.

14.55.9.29.1. (Added) Regulatory Documents. Applicable weapons systems, general TO's and other applicable technical and safety directives.

14.55.9.29.2. (Added) Application. Liquid Fuel Engine Mechanics, WG/WL-8675-08 or higher.

14.55.9.29.3. (Added) Qualification. After completion of training, the individual shall be able to demonstrate proficiency through written or oral and practical examinations (simulated) and be able to complete a written examination with a minimum passing score of 85% (corrected to 100%).

14.55.9.29.4. (Added) Requalification. Annually, or whenever an individual fails to demonstrate adequate proficiency.

14.55.9.29.5. (Added) Disqualification. Observed deficiencies or deviations from technical data, safety violations, DRs, failure to maintain the required level of proficiency, or failure to perform the required procedures IAW the applicable technical directives can be grounds for immediate disqualification. Initial SSQ qualification requirements must be met to be requalified.

14.66. (Added) 309 MXW Electrostatic Discharge (ESD) Control Program. The primary purpose of this program is to establish, describe, and assign specific responsibilities and

procedures for an ESD Control Program within the 309 MXW. This program identifies operating procedures that apply to all employees assigned to 309 MXW who handle Electrostatic Discharge Sensitive items and will minimize ESD damage to electrical/electronic parts, assemblies, and equipment repaired, tested, operated, stored, and transported within 309 MXW. It is intended to supplement existing ESD control guidance through reference and by providing basic procedures where none currently exist. Also provides supplemental information to support HILLAFBMAN 63-501, *Quality Management System*, and TO 00-25-234, *General Shop Practice Requirements For The Repair, Maintenance, and Test of Electrical Equipment*, Section VII, *Electrostatic Discharge Control*, takes precedence over all referenced standards and handbooks. This instruction supports the 309 MXW quality systems.

14.66.1. (Added) Background. Static electricity is an electrical charge at rest. The electrical charge is due to the transfer of electrons within a body or from one body to another. The magnitude of the charge depends on the size, shape, composition, and electrical properties that make up the bodies. The electrical charge can be changed when two substances are rubbed together, separated, or flow relative to one another. The voltage level can reach as high as 35KV (kilovolt) for a human being. The discharge of this voltage potential and electrostatic field is considered detrimental to today's electrical and electronic devices. A discharge from a human being or materials can possess current values of 1-50A. Some of today's circuits are sensitive to voltage as low as 25 volts. The approximate level of voltage for a human being to feel a static discharge is 3,500 volts. Therefore, personnel can do damage to devices without feeling it themselves.

14.66.2. (Added) Responsibilities.

14.66.2.1. (Added) Group commanders/directors will:

14.66.2.1.1. (Added) Appoint a primary and alternate group ESD Control Program Manager in writing to the wing ESD Program Manager. Appointment letters will be maintained by group ESD Control Program Managers for review.

14.66.2.2. (Added) Squadron directors will:

14.66.2.2.1. (Added) Designate primary and alternate squadron ESD POC in writing, to their group ESD Control Program Manager. Appointment letters will be maintained by the group ESD Control Program Manager.

14.66.2.3. (Added) Group ESD Control Program Manager will:

14.66.2.3.1. (Added) Maintain copies of current group ESD Control Program Manager and squadron ESD POC appointment letters.

14.66.2.3.2. (Added) Ensure ESD surveys are conducted by squadron ESD POC and area supervisors, identify and clarify group ESD control strategies for work areas and compile the annual area surveys into written reports.

14.66.2.4. (Added) Squadron ESD POC will:

14.66.2.4.1. (Added) Develop an effective ESD Control Program Survey tailored to their organization and work areas.

14.66.2.4.2. (Added) Conduct work area ESD control surveys in conjunction with each area supervisor. Each ESD work area survey will as a minimum be updated annually or when area

requirements change and will be documented. Area surveys and area sensitivity will be annotated on the 309 MXW Form 234-A, *(ESD) Control Report of Annual Survey*. Area certification will be documented separately on a 309 MXW Form 234, *ESD Work Area Survey/Certification Certificate*, as required (See Figures 14.66A1, 14.66A2). Any additions or changes to the work area between annual survey intervals can be hand written but will be incorporated as a written report when the next annual is accomplished. Survey requirements for existing and new ESD work areas are outlined in TO 00-25-234.

14.66.2.4.3. (Added) Provide an annual written report of the evaluation to the group ESD program manager utilizing the forms listed above to certify, by area supervisor signature, completion of the ESD area survey. Additionally the report will either be posted in the work area or in a readily accessible ESD program file once each work area survey is completed. This certification report will serve as documentation that each surveyed work area is in compliance with program directives and provide a record of the controls required in those areas. Certificate will be made available in the work area IAW T. 00-25-234.

14.66.2.5. (Added) Work Area Supervisor will:

14.66.2.5.1. (Added) Ensure all personnel handling ESD items have initial ESD and annual refresher ESD training. Training will be documented in PAC system, TSS or other approved training data base system.

14.66.2.5.2. (Added) Ensure an ESD Control Report of Annual Survey and/or an ESD Work Area Survey/Certification certificate is accomplished for all areas performing maintenance on or handling ESD components. Supervisors assist the squadron ESD POC in conducting an annual ESD survey and ensure corrective actions are taken to correct any identified deficiencies. Results will be posted in the work area or in a readily accessible ESD program file once the survey is completed. Annual surveys will be accomplished on the anniversary date of the previous annual survey or when area requirements have changed.

14.66.2.5.3. (Added) Notify squadron ESD POC within 10 working days when changes are made to existing areas or additional work areas are required to ensure an ESD Control Report of Annual Survey is reaccomplished. A new ESD area survey is not required for minor changes; pen and ink changes are authorized. Results will be forwarded to the group ESD manager within 30 days any time changes or new requirements are introduced to the work area and then posted within the work area or in a readily accessible ESD program file. The next annual survey will contain the changes and new requirements within the annual written report.

14.66.2.5.4. (Added) Ensure ESD work surfaces (stations) are tested annually. Results will be documented on 309 MXW Form 234 and maintained within the work area.

Electrostatic Discharge (ESD) Control

Report of Annual Survey

Location: _____

Date of survey: _____

1. The Squadron ESD control program POC or designated representative _____ and the shop supervisor _____ accomplished an ESD work area survey IAW T.O. 00-25-234 ESD work area consisting of _____.
2. Any material, equipment or procedures required by this survey will be in accordance with T.O. 00-25-234 and 309 MXW OI 21-234.
3. The area Supervisor and Squadron ESD control program POC researched the levels of ESD sensitivity of LRUs, SRUs and components and found these items to be one of the following (circle one):

<u>NON-SENSITIVE</u>	<u>SENSITIVE</u>	<u>SUPERSENSITIVE</u>
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Supervisor's signature: _____

Date: _____
Day Mon Yr

Phone Number: _____

309 MXW Form 234-A

Figure 14.66A2 (Added) 309 MXW Form 234, *ESD Work Area Survey/Certification Certificate*

ESD WORK AREA CERTIFICATION								
ORGANIZATION:			ESD POINT OF CONTACT (POC):					
SUPERVISOR:			PHONE:					
TECHNICIAN PERFORMING TEST:								
WORK AREA SURVEY DATE:			DATE CERTIFIED:					
Day Month Year			Day Month Year					
RECERTIFICATION DUE DATE:								
Day Month Year								
<p>I certify that the ESD control Survey was performed and deficiencies have been noted and explained to my assigned technician or me. Every effort will be made to correct the deficiencies by accomplishing the corrective actions noted on the survey by the date noted below.</p>								
SUPERVISOR _____ DATE: _____								
Day Month Year								
ESD CONTROLS REQUIRED (REFERENCE T.O. 00-25-234 SECTION VII)								
Area Controll ed	Work Statio n	Wrist Strap s	Groundin g Conducte d	Bench Top Ionizati on (Y/N)	Floori ng Syste m	Garments Gloves Fingercot s	Packagin g And Markings	Misc.

309 MXW Form 234:
00-25-234 SECTION VII)

ESD CONTROLS REQUIRED (REFERENCE T.O.

14.66.2.5.5. (Added) Storage cabinets used to store ESD items will be tested annually and documented in the miscellaneous block on 309 MXW Form 234 or by a label affixed to the cabinet with the current inspection date.

14.66.2.5.6. (Added) ESD testing of all soldering stations will be accomplished every 90 days and documented on 309 MXW Form 234-1, *90 Day Soldering Station ESD Test* (See Figure 14.66A3).

14.66.2.5.7. (Added) Ensure wrist straps are tested and documented on 309 MXW Form 234-2, *ESD Wrist Strap Daily Check* (See Figure 14.66A4), prior to initial use on each shift, if the wrist strap is not used it should be left blank. Each subsequent user shall test the functionality of the wrist strap before use. Each user individually issued wrist straps will maintain a separate 309 MXW Form 234-2 to document testing. If the supervisor elects to use common shop (not individually issued) wrist strap they must develop an in house document to show multiple tests performed daily or provide a continuous wrist strap monitoring device.

14.66.2.5.8. (Added) Ensure all ESD items, serviceable or repairable, are transported and stored in static-shielding and non-charge-generating packages or containers.

NOTE: (Added) Supply personnel handling packages containing ESD items are not required to install ESD caps, plugs, and bags. ESD protection measures will be accomplished, by the mechanic removing the item, immediately upon component removal from aircraft, missiles, test equipment, and line replaceable units.

14.66.2.5.9. (Added) Ensure attached forms; 309 MXW Form 234-A, 309 MXW Form 234, 309 MXW Form 234-1, and 309 MXW Form 234-2, are used to document ESD control program requirements.

NOTE: (Added) Groups may use locally developed forms tailored to their unique requirements, however these forms must be developed and approved by the group ESD control program manager. They must be outlined within a group policy memorandum letter IAW AFI 33-360, and provide direction (instructions on how to complete the forms) in an effort to standardize documentation within the group.

Figure 14.66A3 (Added) 309 MXW Form 234-1, 90 Day Soldering Station ESD Test.

RCC: _____ Solder Station ID Number: _____						
Item	Interval	Date Due	Date Checked	Next Due	Certified By	Test Results
Soldering Station	90 Days					_____
Soldering Station	90 Days					_____
Soldering Station	90 Days					_____
Soldering Station	90 Days					_____

This requirement will be accomplished 90 days from the previous date tested.

309 MXW Form 234-1

90 Day Soldering Station ESD Test

RCC: _____ Solder Station ID Number: _____						
Item	Interval	Date Due	Date Checked	Next Due	Certified By	Test Results
Soldering Station	90 Days					_____
Soldering Station	90 Days					_____
Soldering Station	90 Days					_____
Soldering Station	90 Days					_____

This requirement will be accomplished 90 days from the previous date tested.

309 MXW Form 234-1

Figure 14.66A4 (Added) 309 MXW Form 234-2, ESD Wrist Strap Daily Check

YEAR:												
NAME:												
ORG:												
Day	JAN	Time	FEB	Time	MAR	Time	APR	Time	MAY	Time	JUNE	Time
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
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309 MXW Form 234-2

14.67. (Added) 309 AMXG Delivery of Aircraft after Depot Maintenance.

14.67.1. (Added) 309 AMXG Customer Notification of Aircraft Completion and Delivery.

14.67.1.1. (Added) Aircraft status meetings are conducted each afternoon in the Building 233 Flight Test Branch (F-16 Production Section, 573 AMXS/MXDPAD, and C-130 Production Section, 572 AMXS/MXDPA, conference room. The following 309 AMXG F-16 and C-130 team members are in attendance: master schedulers, paint supervisors, engine shop supervisor, flight test forms and records technician, Flight test supervisors, and schedulers. The 573 AMXS/MXDPAD or 572 AMXS/MXDPA, flight test branch chief chairs this meeting. The flight test schedulers update the status of each aircraft in the PDMSS. 571 AMXS/MXAAPB, A-10 Flight Test supervisors and master scheduler conduct status meetings daily by teleconference. Daily aircraft status includes the applicable critical path network within PDMSS.

14.67.1.2. (Added) F-16 aircraft are Ready for Delivery (RFD) after the 573 AMXS/MXDPA weight and balance technician has accomplished the weight and balance checks and final engine run is accomplished, and the aircraft has been configured if applicable. The F-16 master scheduler will notify the owning activity via telephone or e-mail informing them that their aircraft will be available for pickup in 72 hours. The Schedule Execution Element, 573 AMXG/MXDXAB, flight test lead scheduler will enter this information in the “remarks” block of the flight test status report and update the PDMSS flight test status report network.

NOTE: (Added) AMXG. A 72-hour notice allows the customer time to schedule an air crew to pick up their aircraft and to coordinate last-minute details; i.e., paint cure, desired fuel load, travel pod, external tanks installation, etc. The F-16 Aircraft Branch, 573 AMXS/MXDPA, production technicians will perform the pre-flight and prepare the aircraft for delivery with the required fuel load. The F-16 Procedures and Analysis Element, 573 AMXS/MXDXAA forms and records technician will perform a final records review and inventory.

14.67.1.3. (Added) C-130 and A-10 Aircraft are RFD after all aircraft depot maintenance work specification requirements have been completed. The 572 AMXS/MXDPA or A-10 Production section (571 AMXS/MXAAP) production technicians will then secure the aircraft. 309 AMXG management controls access to the aircraft. The C-130 master scheduler will notify the using activity via telephone informing them their aircraft will be available for pick up in 72 hours. The C-130 WSSC, 572 AMXS/MXDXAA, lead flight test scheduler will enter this information in the “remarks” block of the Flight Test Status Report and update the PDMSS Flight Test Status Report.

14.67.1.4. (Added) The F-16 WSSC section, 573 AMXS/MXDXA, and the C-130 WSSC section (572 AMXS/MXDXAA) master schedulers will receive notice from the using activity via telephone or e-mail confirming the date and time of arrival of the delivery crew to pick up the aircraft (referred to as “firm pickup”). The master scheduler will relay the confirmation notice by telephone, radio, or e-mail to the F-16 or C-130 Prep for Flight/Paint section, 573 AMXS/MXDXAB or 572 AMXS/MXDPA, flight test, scheduler and foreman. The flight test lead scheduler will enter the date, time, and any other information regarding the pickup and delivery of the aircraft in the “remarks” block of the flight test PDMSS status report.

14.67.1.5. (Added) The 573 AMXS/MXDXAA forms and records technician will perform the following tasks after receiving verification that the 72-hour notice was provided to the owning activity:

14.67.1.5.1. (Added) Telephone the Chemical Sciences Laboratory section, 809 MXSS/MXDEA, non-destructive laboratory personnel and ask them to prepare a DD Form 2027, *Oil Analysis Record*. Pick up the completed DD Form 2027 (same day pick-up), print two copies, place the original in the forms and records jacket, a copy in the front of the aircraft 781 book, and a copy in the Engineering branch, 309 AMXG/EN, dead file.

14.67.1.5.2. (Added) Review and update the aircraft AFTO Form 95, print a copy, place original in the forms and records jacket, and file a copy in the 309 AMXG/EN dead file.

14.67.1.5.3. (Added) The crew chief will pick up the AF Form 2692, *Aircraft Missile Equipment Transfer/shipping Listing*, for the delivery aircraft from the forms and records technician, and assist the delivery crew in the performance of the aircraft inventory. After the delivery crew and the 573 AMXS/MXDPADC Flight Test technician crew chief completes the equipment inventory, both parties will sign the AF Form 2692. The crew chief, 573 AMXS/MXDPADC, Flight Test production supervisor, or one of the assigned crew members will hand carry the completed form to the 573 AMXS/MXDXAA forms and records technicians. The forms and records technician will print two copies, give the original and one copy to the delivery crew, and file the remaining copy in the 309 AMXG/EN dead file.

14.67.1.5.4. (Added) Visually check the aircraft forms and records jacket to ensure the weight and balance record book/disk and the identification plate (jet fuel card) are included in the aircraft forms and records jacket, as required.

14.67.1.5.5. (Added) Complete AFTO Form 290, *Aerospace Vehicle Delivery Receipt*, with the delivery pilot, print a copy, place the original in the AFTO Forms 781 book 12"X12" plastic bag in front of 781 jacket file, and file the copy in 309 AMXG/EN dead file.

14.67.1.6. (Added) The 573 AMXS/MXDPADC Flight Test production supervisor or one of the assigned crew members will notify the 309 AMXG/OBSS Aircraft Control Center technician of the time and date of aircraft departure so the technician can update the aircraft departure board. The 573 AMXS/MXDPADC Flight Test supervisor will also notify the 573 AMXS/MXDXAB scheduler of the time and date of the aircraft departure to update the PDMSS Flight Test Status Report. The notifications will be provided via radio or telephone.

14.67.1.7. (Added) The 573 AMXS/MXDXAB Flight Test lead scheduler will enter aircraft departure information in the PDMSS critical path network on the same day that the aircraft departs. The Procedures and Analysis Element, 573 AMXS/MXDXAA, forms and records technician will also send an e-mail message to the 573 AMXS/MXDXAA master schedulers for PDMSS updates and to the Aerospace Vehicle Distribution Officer, 573 AMXS/MXD-AVDO who will file a priority loss message not later than, the first work day after the change of possession takes place (reference AFI 21-103, *Equipment Inventory, Status And Utilization Reporting*).

14.67.1.8. (Added) The job order number will be closed.

14.67.2. (Added) 309 AMXG Aircraft Delivered by the 514th Flight Test Squadron (514 FLTS): The requests for 514 FLTS support to deliver aircraft must be coordinated through

573 AMXS/MXDXAB master schedulers and the 514 FLTS programming or their authorized representatives.

14.68. (Added) Engine Runs and Engines Systems Status.

14.68.1. (Added) 309 AMXG C-130 Aircraft "Engine Run Qualifier," Training Requirements and Responsibilities: Locally assigned personnel will be qualified and certified IAW this instruction before they may accomplish engine runs for 309 AMXG. All personnel involved in the qualification and certification process will ensure all policies stated in this instruction are followed.

14.68.1.1. (Added) To be certified as a 572 AMXS/MXDPACB engine run qualifier, a person must be a certified C-130 engine run technician, as outlined in Section 1B of this instruction, and satisfy the following additional requirements:

14.68.1.1.1. (Added) Have a minimum of 1 year of engine run experience on C-130 aircraft.

14.68.1.1.2. (Added) Be recommended by their immediate supervisor.

14.68.1.1.3. (Added) Be certified by a C-130 instructor pilot or an engine run qualified instructor. A qualification official appointment letter will be kept in the group training section (309 AMXG/OBST), and a copy of the appointment letter will be given to the individual.

14.68.1.2. (Added) AMXG Qualifier's Responsibilities:

14.68.1.2.1. (Added) Qualify C-130 engine run technicians according to procedures outlined in paragraph **14.68.1.6.** (Section 1B), and AFI 11-218 AFMC Sup 1, *Aircraft Operations and Movement on the Ground*. Ensure the system of monitoring currency of engine run certified technicians is in place and adequate to identify any engine run technician that has not maintained currency IAW paragraph **14.68.1.9.2.**

14.68.1.2.2. (Added) Immediately notify the individual's supervisor for decertification documentation in the event that engine run currency lapses or any required training has expired. Ensure re-qualification is granted only after the deficiency is corrected and requirements of this chapter are satisfied.

14.68.1.2.3. (Added) Conduct spot inspections to verify and ensure engine run proficiency. Ensure documentation templates and/or locally developed forms for evaluations are developed and on file for qualifier's use.

14.68.1.3. (Added) 309 AMXG C-130 Aircraft Engine Run Training Requirements. The first-level supervisor must determine that a requirement exists for an engine run position in their area before proceeding with the training and certification procedure.

14.68.1.4. (Added) 309 AMXG; to be certified for the pilot and co-pilot position (WG-11 8852 or higher), a person must:

14.68.1.4.1. (Added) Complete training and confidence runs as outlined in paragraph

14.68.1.5. (Section 1B).

14.68.1.4.2. (Added) Be PAC certified to operate APU)gas turbine marshalling and intercom system (ICS),ultra high frequency (UHF) radio systems.

14.68.1.4.3. (Added) Be qualified by the 572 AMXS/MDPACB C-130 engine run qualifier IAW paragraph **14.68.1.6.**

14.68.1.5. (Added) 309 AMXG Training and Confidence Engine Runs:

14.68.1.5.1. (Added) A minimum of three training and confidence runs will be accomplished prior to certification (these may be done in the simulator).

14.68.1.5.2. (Added) Training runs will include all power settings for knowledge, skill, and proficiency demonstration.

14.68.1.5.3. (Added) Review applicable publications listed in Attachment 1, C-130 Engine Run Qualification, of this document with the engine run qualifier prior to starting or running engines.

14.68.1.5.4. (Added) The trainee may occupy the pilot, co-pilot, or engineer seat during an engine run, provided the following is met:

14.68.1.5.4.1. (Added) A certified engine run person occupies the pilot or co-pilot seat during training engine runs. The engine run qualifier is required to be on the aircraft for all training runs and may occupy the pilot, copilot, flight engineer seat, or instructor position.

14.68.1.5.4.2. (Added) Another certified technician or qualified engineer seat technician occupies the third engineer seat for settings above ground idle range, IAW paragraph 14.68.1.7.

14.68.1.6. (Added) 309 AMXG engine run qualification and certification procedure after completion of all training requirements.

14.68.1.6.1. (Added) Demonstrate engine start and engine run proficiency according to AFI 11-218 AFMC Sup 1, to the satisfaction of an engine run qualifier; if one is not available, then to an instructor pilot.

14.68.1.6.2. (Added) The certifier will verify completion and documentation of all academic requirements.

14.68.1.7. (Added) 309 AMXG. To be certified for engine operation flight engineer's seat, a person must be a WG-10 8852/2892 or higher and meet all training/qualification requirements identified for persons in the pilot or co-pilot position.

14.68.1.7.1. (Added) To be qualified for the "ground controller" position, a person must:

14.68.1.7.2. (Added) Have 30 days' C-130 flight line experience.

14.68.1.7.3. (Added) Complete C-130 Familiarization and C-130 Ground Emergency Escape Course.

14.68.1.7.4. (Added) Complete a marshalling course to include visual marshalling signals, emergency visual signals, and ground-oriented emergency procedures.

14.68.1.7.5. (Added) Successfully complete a fire extinguisher training course.

14.68.1.8. (Added) 309 AMXG. To be qualified for the "on the stand" position, a person must:

14.68.1.8.1. (Added) Possess a WG-10 journeyman skill level.

14.68.1.8.2. (Added) Have 6 months C-130 flight line experience.

14.68.1.8.3. (Added) Successfully complete a fire extinguisher training course.

14.68.1.9. (Added) 309 AMXG C-130 90-Day Engine Run Currency Requirements:

14.68.1.9.1. (Added) Engine run technicians certified for the pilot or co-pilot seat are required to complete a minimum of one engine run every 90 days. It is the technician's responsibility to maintain currency. Failure to maintain currency will result in immediate decertification.

14.68.1.9.2. (Added) C-130 Flight Test, 572 AMXS/MXDPACB engine run technicians will be responsible to annotate their engine runs in the engine run log book located at the C-130 first-level supervisor desk area. The responsible C-130 supervisor will ensure the engine run technicians are current before assigning them to an aircraft run.

14.68.1.10. (Added) 309 AMXG. For engine operations in ground idle range there must be Minimum C-130 Engine Run Crew Requirements and Responsibilities:

TO WARNING: (Added) DURING C-130 ENGINE OPERATION, THE AIRCRAFT BLEED AIR SYSTEM AND POTENTIAL FOR AIRCRAFT MOVEMENT POSE SIGNIFICANT SAFETY HAZARDS. THEREFORE, DURING THE OPERATION OF ONE OR MORE ENGINES, NO EXTERNAL MAINTENANCE WILL BE PERFORMED.

TO CAUTION: (Added) ENGINES MAY BE OPERATED FOR LEAK CHECK WITH ACCESS PANELS COMPLETELY REMOVED OR COMPLETELY INSTALLED. FOR PROPELLER BALANCING, THE UPPER LEFT PROPELLER COWLING WILL BE REMOVED THROUGHOUT THE ENTIRE TASK. FOR ENGINE COMPRESSOR WASHES, THE LOWER LEFT COWLING WILL BE REMOVED. WHEN CHECKING COMPRESSOR BLEED VALVES FOR PROPER OPERATION, THE CLAM SHELL DOORS WILL BE SECURED OPEN WITH DOUBLED .032 SAFETY WIRE.

14.68.1.10.1. (Added) A certified engine run technician in the pilot's and co-pilot's seat. A person in training may occupy one of these seats providing all requirements in paragraph 1.4. (Section 1B) of this chapter have been satisfied. The engine run technician's responsibilities will include the following:

14.68.1.10.1.1. (Added) Supervise the overall engine run operation. The individual in the pilot's seat will be the engine run supervisor.

CAUTION: (Added) ANTI-COLLISION LIGHTS MUST BE ON JUST PRIOR T.O. ENGINE START UNTIL ENGINE SHUT DOWN.

14.68.1.10.1.2. (Added) Ensure the aircraft is prepared for the engine run IAW applicable technical data and that all technical data required for troubleshooting are on the aircraft prior to engine start.

14.68.1.10.1.3. (Added) Accomplish and document a pre and post-engine maintenance run intake and exhaust inspection on AFTO Form 781A. If FOD is encountered, notify his/her supervisor who will ensure impoundment procedures are implemented IAW chapter 9B of this instruction. An investigation will be initiated according to AFI 91-204.

14.68.1.10.1.4. (Added) Pre-engine run intake and exhaust inspections will be accomplished and documented in the aircraft AFTO Forms 781A before engines are started. Inspections will be accomplished and signed off by two certified technicians. The post engine run intake and exhaust inspections will be accomplished and the results documented in the aircraft AFTO Forms 781A. Inspections will be accomplished and signed off by two certified technicians. The post engine run intake and exhaust inspections and documentation will take place immediately after the run is complete. If, because of some extenuating circumstance, they cannot be

immediately accomplished; i.e., lightning hold, high winds, etc., it will be documented in the AFTO Forms 781As as due, and accomplished at the first available opportunity after such circumstance has ceased.

14.68.1.10.1.5. (Added) Ensure all equipment, aircraft, and personnel are clear of the engine run-up area, including the area up to 350 feet to the rear of any aircraft being operated above Normal Ground Idle (NGI) unless utilizing engine run blast fences.

14.68.1.10.1.6. (Added) Brief all crew members on the operation being performed prior to engine start and review all emergency and ground egress procedures. Ensure all crew members are fully qualified for the positions to which they are assigned.

14.68.1.10.1.7. (Added) Obtain engine run clearance through the 309 AMXG Control Center. The 309 AMXG Control Center will require the following information before clearance may be granted:

14.68.1.10.1.8. (Added) Aircraft tail number and parking spot.

14.68.1.10.1.9. (Added) Names of the individuals occupying the pilot's and co-pilot's seats.

14.68.1.10.1.10. (Added) Contact "Hill Ground" via the aircraft UHF radio (frequency 275.8) for clearance prior to engine start. Inform them of any special requirements, approximate run time, and whether the run will be an on-speed or maximum power run. The run crew will maintain contact with the tower on UHF frequency 275.8 during the entire engine run and inform them of engine run termination. When the tower is closed (before 0900 or after 2200 hours), engine run personnel will use the same UHF frequency (275.8) to maintain contact with the 309 AMXG Control Center.

14.68.1.10.1.11. (Added) If the engine run is a first run after depot maintenance (green run), request a fire truck through the 309 AMXG Control Center, and ensure the fire truck is in position prior to engine start. Following completion of green runs, all documented engine run data will be reviewed. A copy of the engine run data will be given to the 514th Flight Test Squadron, 514 FLTS, for disposition and review of safety of flight requirements.

14.68.1.10.1.12. (Added) Ensure intake plugs are installed after the engine run is completed.

14.68.1.10.2. (Added) 309 AMXG; the responsibilities of the ground controller that has completed training requirements in paragraph 14.68.1.10. will include the following:

14.68.1.10.2.1. (Added) Advise the engine run supervisor (in the pilot position) in the event other aircraft, vehicles, or personnel enter the propeller blast area or if any adverse condition develops, i.e., fire, oil, leak, etc., and, if necessary, direct power reduction to prevent injury or damage.

14.68.1.10.2.2. (Added) Be positioned at approximately a 45-degree angle from the crew entrance door, in view of engine run supervisor. Technician will maintain intercom communication at all times.

14.68.1.10.2.3. (Added) Be equipped with a 150-pound Halon fire extinguisher or equivalent within the aircraft run area. Should a fire develop, the ground controller will not approach the engine or area until all engines and bleed air have been shut down.

14.68.1.10.3. (Added) An 309 AMXG technician will occupy the cargo compartment for initial engine start after depot maintenance (green run). This individual will be on headset with the

engine run supervisor and will be positioned to check for leaks and other abnormal conditions in the cargo compartment.

14.68.1.11. (Added) For 309 AMXG engine operations on restricted power locations (spots 1, 2, 3, 6, 7), all requirements in paragraphs 14.68.1.10. and 14.68.1.13.1. will be accomplished along with the following additional requirements:

14.68.1.11.1. (Added) For high power run, the aircraft will be positioned in a spot approved for high power engine runs. See paragraph **1.13.2.** for engine run locations and parameters.

14.68.1.11.2. (Added) A certified technician is required in the flight engineer seat, qualified according to paragraphs 14.68.1.6 and 14.68.1.7.

WARNING: (Added) TO PREVENT ENGINE FOD OR PERSONAL INJURY DURING "MAN ON STAND" ENGINE RUNS, ALL COWLINGS AND PANELS WILL BE COMPLETELY INSTALLED OR COMPLETELY REMOVED. UPPER COWLINGS MAY BE OPEN PROVIDED THAT THEY ARE SECURED OPEN WITH .032 DOUBLE SAFETY WIRE. THE FORWARD WHEELS OF THE WORK STAND WILL BE TURNED SIDEWAYS, AND THE CHAINS WILL BE FULLY WRAPPED AROUND ALL FOUR LOCKED WORK STAND WHEELS TO PREVENT MOVEMENT PRIOR TO ENGINE START.

14.68.1.12. (Added) For 309 AMXG engine operations with "man on stand," the procedure in TO 1C-130()-2-71JG-00-1, *Power Plant Organizational Maintenance and Checklist*, will be strictly adhered to.

WARNING: (Added) ONCE BLEED AIR HAS BEEN APPLIED, DO NOT MOVE THE STANDS UNTIL ENGINE SHUT DOWN (NO ROTATION) AND BLEED AIR IS REMOVED.

14.68.1.12.1. (Added) The 309 AMXG individual performing "man on stand" duties will be qualified according to paragraph 14.68.1.8.

14.68.1.12.2. (Added) The individual on the stand, by the engine, must be familiar with the job and history of the discrepancy.

14.68.1.13. (Added) 309 AMXG C-130 Engine Run Locations:

CAUTION: (Added) IF THE SAFETY ZONE BEHIND AN AIRCRAFT WITH RUNNING ENGINES IS VIOLATED (WITHIN 350 FEET), EXCEPT FOR SPOTS 4 AND 5, OR TRAFFIC MOVES (WITHIN 50 FEET) IN FRONT OF THE AIRCRAFT, OR ANY EMERGENCY VEHICLE IS SIGHTED APPROACHING THE AIRCRAFT, THE GROUND OBSERVER WILL NOTIFY THE RUN SUPERVISOR. THE RUN SUPERVISOR WILL IMMEDIATELY RETURN THE ENGINES TO THE NGI SETTING UNTIL SUCH AREAS ARE CLEARED TO CAUTION.

14.68.1.13.1. (Added) C-130 parking spots 1, 2, 3, 6, and 7 on the 309 AMXG flight line are designated as "*Restricted Power Engine Run Locations*". Restricted power runs will not exceed two symmetrical engines at crossover power (approximately 9000 lbs. of torque).

WARNING: (Added) WHEN UTILIZING TAXIWAY ECHO OR TAXIWAY DELTA EAST FOR ENGINE RUNS AT CROSSOVER AND ABOVE, THE AIRCRAFT WILL BE POSITIONED TO ENSURE A 500-FOOT CLEAR ZONE BEHIND AIRCRAFT. THE

GROUND OBSERVER WILL ENSURE THIS CLEAR ZONE IS MAINTAINED AND IF VIOLATED, IMMEDIATELY DIRECT THE ENGINE RUN SUPERVISOR TO REDUCE POWER TO NGI.

14.68.1.13.2. (Added) C-130 parking spots 4 and 5 on the 309 AMXG flight line are designated as *"High Power Engine Run Locations."* The Alternate high power location is Taxiway Echo north of the tower. *High power* is defined as any engine run at power settings above power settings in paragraph 14.68.1.13.1. of this instruction. High power run locations are limited by the following restrictions:

14.68.1.13.2.1. (Added) Engines being run above NGI shall be kept to a minimum duration to accomplish engine operations or troubleshooting.

14.68.1.13.2.2. (Added) At no time will all four engines be advanced to maximum power at the same time; two symmetrical engines will remain at ground idle.

14.68.1.13.2.3. (Added) In inclement weather when a hazard exists, such as icing, blowing snow, slippery conditions, or reduced visibility, high power engine operations will immediately be terminated until the hazard no longer exists.

14.68.2. (Added) 309 AMXG F-16 Aircraft "Engine Run Qualifier" Training Requirements and Responsibilities: All assigned personnel tasked to operate installed F-16 engines will be qualified and certified IAW this instruction before they may accomplish engine runs for the 309 AMXG. All personnel involved in the qualification and certification process will ensure all policies stated in this instruction are followed.

14.68.2.1. (Added) To be certified as a Preparation for Flight, 573 AMXS/MXDPADC, engine run qualifier, a person must be a certified F-16 engine run technician as outlined in paragraph

14.68.2.4. (Added) of this supplement, and satisfy the following additional requirements:

14.68.2.1.1. (Added) Have a minimum of 1 year's engine run experience on F-16 aircraft.

14.68.2.1.2. (Added) Must be qualified to run Pratt & Whitney F100PW/220E/229 and General Electric F110GE-100/129 engines.

14.68.2.1.3. (Added) Be a WL-11 8852, or higher.

14.68.2.1.4. (Added) Be certified by an F-16 instructor pilot. A qualification official appointment letter will be kept in 309 AMXG/OBST, and a copy of the appointment letter will be given to the individual.

14.68.2.1.5. (Added) The engine run qualifier will accompany and/or instruct simulator training for engine run technicians annually.

14.68.2.2. (Added) 309 AMXG Qualifier Responsibilities:

14.68.2.2.1. (Added) Qualify F-16 engine run technicians according to procedures outlined in paragraph 14.68.2.4 (Section 2B) and AFI 11-218 AFMCSup 1.

14.68.2.2.2. (Added) Ensure the system of monitoring currency of engine run certified technicians is in place and adequate to identify any engine run technician that has not maintained currency IAW paragraph 14.68.2.9 (Section 2B).

14.68.2.2.3. (Added) Ensure individuals are immediately decertified in the event that engine run currency lapses or any required training has expired. Ensure requalification is granted only after the deficiency is corrected and requirements are satisfied.

14.68.2.2.4. (Added) Conduct spot inspections to verify and ensure engine run proficiency. Ensure documentation templates and/or locally developed forms for evaluations are developed and on file for qualifier use.

14.68.2.3. (Added) 309 AMXG, F-16 Aircraft Engine Run Training Requirements: The first-level supervisor must determine that a requirement exists for an engine run position in their area before proceeding with the training/certification procedure.

14.68.2.4. (Added) 309 AMXG, to be certified as an F-16 engine run technician, a person must:

14.68.2.4.1. (Added) To be certified as an F16 engine run technician a person must be a WG-8852-11 or higher.

14.68.2.4.2. (Added) Complete all training requirements as outlined in paragraph 14.68.2.5. (Section 2B). Have 1 year F-16 experience and 6 months flight line experience on F-16 aircraft, complete the F-16 Familiarization Course (course code 0283), F-16 Egress Familiarization Course (course code 078), and the F-16 EPU/Hydrazine Familiarization Course (course code 038) administered by 309 AMXG/OBST. Successfully complete Aircraft Marshalling (course code 0899) IAW AFI 11-218 AFMC Sup 1, to include visual marshalling signals, emergency visual signals, ground oriented emergency procedures, and F-16 Engine Inlet Inspection (course code 1246).

14.68.2.4.3. (Added) Is PAC certified to operate the ICS and UHF radio systems. Active duty military must be qualified through documentation in their AF Form 623, and have successfully completed the local engine run training course “F-16 Engine Run procedures for F100PW/220E/229 Pratt and Whitney Engines” (course code 779) or “F-16 Engine Run procedures for F110GE – 100/129 General Electric Engines” (course code 371). Engine run technicians may be qualified to operate one or both engine types (i.e., Pratt & Whitney or General Electric). The written test described in paragraph 14.68.2.4.3. (Section 2B) will not be scheduled until satisfactory completion of this course.

14.68.2.4.4. (Added) Be qualified by the 573 AMXS/MXDPADC F-16 engine run qualifier IAW paragraph 14.68.2.6. (Section 2B) of this supplement and certified by their supervisor. Complete a written test, administered by the 309 AMXG Resources Management Section (309 AMXG/OBR), with a minimum total score of 85 percent correct (corrected to 100 percent) and score 100 percent on all emergency procedures.

14.68.2.4.5. (Added) Successfully completed an initial simulator training course.

14.68.2.5. (Added) 309 AMXG F-16 Engine Run Training:

14.68.2.5.1. (Added) A minimum of three dry training runs (engine not running) with the engine run qualifier will be accomplished prior to the engine running certification. These may be accomplished in the F-16 simulator or an actual F-16 aircraft cockpit.

14.68.2.5.2. (Added) The dry training runs (engine not running) will include all power settings for knowledge, skill, and proficiency demonstration. Emergency procedures will be included in all training runs.

14.68.2.5.3. (Added) Review applicable publications listed in Attachment 14.68.A2., F-16 Engine Run Qualification, of this document with the engine run qualifier prior to beginning the practice run.

14.68.2.5.4. (Added) All F-16 initial training runs will be accomplished with a minimum of three aircraft runs tied down in an approved F-16 suppressor or hush house, with additional two aircraft runs unrestrained on the flight line. If possible, F-16 certification run will be accomplished in a two-seat model (F-16 B/D) with the qualifier occupying the back seat. If a two-seat model is not available, the qualifier will supervise the run from the ground in contact with the run person at all times via the aircraft intercom system.

14.68.2.6. (Added) 309 AMXG, Engine-run certification procedure after completion of all training requirements:

14.68.2.6.1. (Added) Demonstrate engine start and engine run proficiency to the satisfaction of the engine run qualifier, according to AFI 11-218 AFMC Sup 1. If one is not available, the demonstration will be made to an instructor pilot.

14.68.2.6.2. (Added) The qualifier will verify completion and documentation of all academic training requirements in paragraph 14.68.2.4. (Section 2B).

14.68.2.6.3. (Added) Recertification will be accomplished annually from the last certification date by completing the following requirements:

14.68.2.6.3.1. (Added) Re-accomplish the written test, administered by 309 AMXG/OBST, with a minimum total score of 85 percent correct (corrected to 100 percent) and score 100 percent on all bold-faced and emergency procedures.

14.68.2.6.3.2. (Added) Complete a refresher simulator training course.

14.68.2.6.3.3. (Added) Completion of Emergency Procedures and Engine Operation Test for both initial and recurring certifications as well as refresher simulator or practical given by qualifier.

14.68.2.6.4. (Added) 309 AMXG, failure to satisfactorily complete these requirements will result in immediate de-certification until all deficiencies are corrected.

14.68.2.7. (Added) 309 AMXG, to be qualified for the "ground controller" position, a person must:

14.68.2.7.1. (Added) Be a WG-8852/2892-10 or higher.

14.68.2.7.2. (Added) Be launch and recovery qualified and have 90 days F-16 flight line experience.

14.68.2.7.3. (Added) Complete F-16 EPU/Hydrazine Familiarization.

14.68.2.7.4. (Added) Successfully complete a fire extinguisher training course.

14.68.2.8. (Added) 309 AMXG, F-16 90-Day Engine-Run Currency Requirements:

14.68.2.8.1. (Added) Engine run technicians are required to complete a minimum of one engine run every 90 days. It is the technician's responsibility to maintain currency.

14.68.2.8.2. (Added) Run technicians will be responsible to annotate their engine runs in the engine run logbook located at the F-16 first-level supervisor's desk area. First-line supervisor

will check currency of run technician in PAC prior to run, and will update 90-day run currency in PAC after completion of run. Failure to maintain currency will result in immediate decertification.

14.68.2.9. (Added) 309 AMXG. For F-16 engine operations on the 309 AMXG flight line, there must be minimum F-16 engine run crew requirements and responsibilities:

WARNING: (Added) F-16 ENGINE RUNS ON THE FLIGHTLINE WILL NOT EXCEED 85 PERCENT REVOLUTION PER MINUTE (RPM). AIRCRAFT THAT REQUIRE POWER SETTINGS ABOVE 85 PERCENT WILL BE TOWED TO THE APPROPRIATE F-16 SUPPRESSOR OR HUSH HOUSE AND TIED DOWN IN ACCORDANCE WITH THE APPLICABLE TECHNICAL DATA.

14.68.2.9.1. (Added) A certified engine run technician in the pilot's seat. The engine run technician's responsibilities will include the following:

14.68.2.9.1.1. (Added) Overall supervision of the engine run operation.

14.68.2.9.1.2. (Added) Ensure the aircraft is prepared for the engine run IAW applicable technical data and that all technical data required for troubleshooting is available prior to engine start.

WARNING: (Added) THE ENGINE RUN SCREEN WILL BE UTILIZED AT ALL TIMES. WHEN RUNNING ENGINES DURING ICE FOD CONDITIONS, THE GROUND OBSERVER WILL BE POSITIONED TO WATCH THE INTAKE LIP FOR ICE FORMING. IF ICE FORMS TO A MAXIMUM THICKNESS OF 1/4 INCH, THE GROUND OBSERVER WILL IMMEDIATELY DIRECT THE RUN TECHNICIAN TO SHUT DOWN.

14.68.2.9.1.3. (Added) Accomplish and document a pre- and post-engine maintenance run intake and exhaust inspection on AFTO Form 781A. If FOD is encountered, notify his/her supervisor who will ensure impoundment procedures are implemented IAW chapter 9B of this volume. An investigation will be initiated according to AFI 91-204.

14.68.2.9.1.4. (Added) Ensure all equipment, aircraft, and personnel are clear of the engine run-up area, including the area up to 350 feet to the rear of any aircraft being operated above idle.

14.68.2.9.1.5. (Added) Brief all crew members on the operation being performed prior to engine start and review all emergency and ground egress procedures. Ensure all crew members are fully qualified for the positions to which they are assigned.

WARNING: (Added) ALL PAPER AND TAPE WILL BE REMOVED FROM THE AIRCRAFT CANOPY PRIOR TO ANY ENGINE OPERATION.

WARNING: (Added) TO PREVENT ENGINE FOD DURING ENGINE RUNS, ALL PANELS WITHIN 10 FEET OF THE ENGINE INTAKE WILL BE COMPLETELY INSTALLED. PERSONNEL WILL NOT BE ALLOWED ON TOP OF THE AIRCRAFT AT ANY TIME DURING THE RUN.

14.68.2.9.1.6. (Added) Perform a FOD walk, covering an area 50 feet forward of the aircraft intake.

14.68.2.9.1.7. (Added) Obtain engine run clearance through the 309 AMXG Control Center. The 309 AMXG Control Center will require the following information before clearance may be granted:

14.68.2.9.1.7.1. (Added) Aircraft tail number and parking spot.

14.68.2.9.1.7.2. (Added) Name of the individual occupying the pilot's seat.

14.68.2.9.1.8. (Added) Contact "Hill Ground" via the aircraft UHF radio (frequency 275.8) for clearance prior to engine start. Inform them of any special requirements, approximate run time, and whether the run will be an idle or maximum power run. The run crew will maintain contact with the tower on UHF frequency 275.8 during the entire engine run and inform them of engine run termination. When the tower is closed (before 0900 or after 2200 hours) engine run personnel will maintain contact with the 309 AMXG Control Center. (UHF 275.8).

14.68.2.9.1.9. (Added) If the engine run is a first run after depot maintenance (green run), request a fire truck through 309 AMXG Control Center and ensure the fire truck is in position prior to engine start, if aircraft is not installed in the hush house or sound suppressor.

14.68.2.9.1.10. (Added) Ensure F-16 aircraft has wing tip and anti-collision lights turned "ON".

14.68.2.9.1.11. (Added) Ensure intake plug is installed after the engine run is completed.

14.68.2.9.1.12. (Added) After engine shutdown, ensure the required AFTO Form 781A entries are made for all discrepancies encountered during the run.

14.68.2.9.2. (Added) 309 AMXG responsibilities of a ground controller who has completed training requirements in paragraph 14.68.2.8. of this supplement will include the following:

14.68.2.9.2.1. (Added) Ground communication with run technician at all times.

14.68.2.9.2.2. (Added) Advise the engine run technician of any other aircraft, vehicles, or personnel entering the exhaust blast area, or if any adverse condition develops; i.e., fire, oil, leak, etc., and, if necessary, direct power reduction to prevent injury or damage.

14.68.2.9.2.3. (Added) Be equipped with a 150-pound Halon fire extinguisher or equivalent within the aircraft run area. Should a fire develop, the ground controller will not approach the engine intake area until the engine has been shut down.

14.68.2.10. (Added) For 309 AMXG engine operations above 85 percent, all requirements in paragraph 14.68.2.9. will be accomplished. The aircraft will be positioned in a spot approved for high power engine runs. See Section 2D of this document for engine run locations and parameters.

14.68.2.11. (Added) 309 AMXG F-16 parking spots on the 309 AMXG flight line are designated as "*Low Power Engine Run Locations.*" *Low power* is defined as an engine run not to exceed 85 percent revolutions per minute (rpm).

CAUTION: (Added) IF THE SAFETY ZONE BEHIND AN AIRCRAFT WITH RUNNING ENGINES IS VIOLATED (WITHIN 200 FEET), OR TRAFFIC MOVES (WITHIN 50 FEET) IN FRONT OF THE AIRCRAFT, OR ANY EMERGENCY VEHICLE IS SIGHTED APPROACHING THE AIRCRAFT, THE GROUND OBSERVER WILL NOTIFY THE RUN SUPERVISOR. THE ENGINE RUN

SUPERVISOR WILL IMMEDIATELY RETURN ENGINE TO IDLE SETTING UNTIL SUCH AREAS ARE CLEARED.

14.68.2.12. (Added) 309 AMXG "*High Power Engine Run Locations*" for the F-16 include the outside F-16 suppressor located to the north of Building 270 and Facility 24 located north of Hangar 1. The outside suppressor is suitable for the Pratt & Whitney F100PW-220E only. All other F-16 engine applications requiring high power runs will be towed to Facility 24.

14.68.2.12.1. (Added) "*High Power Engine Run Locations*" for the A-10 include all approved outside tie down areas and Facility 24 located north of Hangar 1.

14.68.2.13. (Added) 309 AMXG, all Hush House operations will be IAW established procedures and Attachment 14.68.A5.: Hush House Operation Instructions.

14.68.2.14. (Added) 309 AMXG, in inclement weather, when a hazard exists such as icing, blowing snow, slippery conditions, or reduced visibility, high power engine operations will immediately be terminated until the hazard no longer exists.

14.68.3. (Added) 309 AMXG A-10 Aircraft "Engine Run Qualifier", Training Requirements and Responsibilities: All assigned personnel tasked to operate installed A-10 engines will be qualified and certified IAW this document before they may accomplish engine runs for 571 AMXS. All personnel involved in the qualification and certification process will ensure all policies stated in this instruction are followed.

14.68.3.1. (Added) To be certified as a Preparation for Flight, 571 AMXS/MXDPAB engine run qualifier, a person must be a certified A-10 engine run technician as outlined in Section 3 of this instruction and satisfy the following additional requirements:

14.68.3.1.1. (Added) Have a minimum of 1 year's engine run experience on A-10 aircraft.

14.68.3.1.2. (Added) Be recommended by their immediate supervisor and be a WL-8852-11 or higher.

14.68.3.1.3. (Added) Be certified by an A-10 instructor pilot. A qualification official appointment letter will be kept in 309 AMXG/OBST, and a copy of the appointment letter will be given to the individual.

14.68.3.2. (Added) 309 AMXG Qualifier's Responsibilities:

14.68.3.2.1. (Added) Qualify A-10 engine run technicians according to procedures outlined in Section 3B of this supplement, AFI 11-218_AFMC_SUP1.

14.68.3.2.2. (Added) Ensure the system of monitoring currency of engine run certified technicians is in place and adequate to identify any engine run technician that has not maintained currency IAW paragraph 14.68.3.9. (Section 3B).

14.68.3.2.3. (Added) Ensure individuals are immediately decertified in the event that engine run currency lapses or any required training has expired. Ensure requalification is granted only after the deficiency is corrected and requirements of this instruction are satisfied.

14.68.3.2.4. (Added) Conduct spot inspections to verify and ensure engine run proficiency. Ensure documentation templates and/or locally developed forms for evaluations are developed and on file for qualifier's use.

14.68.3.3. (Added) 309 AMXG A/O-10 Aircraft Engine Run Training Requirements: The first-level supervisor must determine that a requirement exists for an engine run position in their area before proceeding with the training and certification procedure.

14.68.3.4. (Added) 309 AMXG, to be certified as an A/OA-10 engine run technician, a person must:

14.68.3.4.1. (Added) Complete three dry practice runs (engine not running) as outlined in paragraph 3.5. (Section 3B).

14.68.3.4.2. (Added) Be PAC certified to operate the ICS and UHF radio systems. Active duty military must be qualified through documentation in their AF Form 623.

14.68.3.4.3. (Added) Be qualified by the 571 AMXS/MXDPAB A-10 engine run qualifier IAW paragraph 14.68.3.6. (Section 3B) of this document and certified by their supervisor.

14.68.3.5. (Added) 309 AMXG A/OA-10 Engine Run Practice.

14.68.3.5.1. (Added) A minimum of three dry practice runs (engine not running) with the engine run qualifier will be accomplished prior to the engine running certification. These may be accomplished in an A-10 aircraft cockpit.

14.68.3.5.2. (Added) The dry practice runs (engine not running) will include all power settings for knowledge, skill, and proficiency demonstration. Emergency procedures will be included in all practice runs.

14.68.3.5.3. (Added) Review applicable publications listed in Attachment 14.68.A3: A/OA-10A Engine Run Qualification, of this document with the engine run qualifier prior to beginning the practice run.

14.68.3.6. (Added) 309 AMXG. Engine run certification procedure after completion of all training requirements.

NOTE: (Added) All 309 AMXG A/OA-10() initial certification runs will be accomplished with the aircraft parked on the Prep-for-Flight flight line (Building 233 or Building 270). If necessary, the engine run qualifier (trainer) may stand on the ladder for training or certification purposes and utilize a "Y" interphone cord with a ground.

14.68.3.6.1. (Added) Demonstrate engine start and engine run proficiency to the satisfaction of the engine run qualifier, according to AFI 11-218 AFMC Sup 1. If one is not available, the demonstration will be made to an instructor pilot or 309 AMXG/MXAAPBF A-10 engine run Air Force Engineering and Technical Service (AFETS) Technician.

14.68.3.6.2. (Added) The qualifier will verify completion and documentation of all academic training requirements in paragraph 14.68.3.4. (Section 3B).

14.68.3.6.3. (Added) Completion of emergency procedures and engine operation test for both initial and recurring certifications as well as refresher simulator or practical given by qualifier.

14.68.3.7. (Added) 309 AMXG. To be qualified for the "ground controller" position, a person must:

14.68.3.7.1. (Added) Be launch and recovery qualified and have 30 days A/OA-10A flight line experience.

14.68.3.7.2. (Added) Complete Safe for Maintenance (course code 1086), A-10 Familiarization (course code 1276), and Egress Familiarization (course code 1087), administered by 309 AMXG/OBST.

14.68.3.7.3. (Added) Successfully complete a marshalling SOJT checklist and written exam IAW AFI 11-218 AFMC Sup 1, to include visual marshalling signals, emergency visual signals, and ground-oriented emergency procedures.

14.68.3.7.4. (Added) Successfully complete a fire extinguisher training course.

14.68.3.8. (Added) 309 AMXG A/OA-10A 90-Day Engine Run Currency Requirements:

14.68.3.8.1. (Added) Engine run technicians are required to complete a minimum of one engine run every 90 days. It is the technician's responsibility to maintain currency. Failure to maintain currency will result in immediate decertification.

14.68.3.8.2. (Added) A/OA-10A engine run technicians will be responsible to annotate their engine runs in the engine run logbook located at the A-10 first-level supervisor's desk area. The first-level supervisors will update the engine run currency on each employee in their PAC records.

14.68.3.9. (Added) 309 AMXG A/OA-10A engine operations on the 309 AMXG flight line, there must be minimum A/OA-10A Engine Run Crew Requirements and Responsibilities:

WARNING: (Added) A/OA-10A ENGINE RUNS ON THE FLIGHTLINE THAT WILL EXCEED 85 PERCENT REVOLUTIONS PER MINUTE (RPM) WILL BE TOWED TO THE APPROPRIATE A/OA-10-() POWER RUN AREA AND TIED DOWN IN ACCORDANCE WITH THE APPLICABLE TECHNICAL DATA.

14.68.3.9.1. (Added) A certified engine run technician will be in the pilot's seat. The engine run technician responsibilities will include the following:

14.68.3.9.1.1. (Added) Overall supervision of the engine run operation.

14.68.3.9.1.2. (Added) Ensure the aircraft is prepared for the engine run IAW applicable technical data and that all technical data required for troubleshooting is available prior to engine start.

WARNING: (Added) WHEN RUNNING ENGINES DURING ICE FOD CONDITIONS, A GROUND OBSERVER WILL BE POSITIONED TO WATCH THE INTAKE LIP FOR ICE FORMING. IF ICE FORMS TO A MAXIMUM THICKNESS OF 1/4 INCH, THE GROUND OBSERVER WILL IMMEDIATELY DIRECT THE RUN TECHNICIAN TO SHUT DOWN.

14.68.3.9.1.3. (Added) Accomplish and document a pre- and post-engine maintenance run intake and exhaust inspection on AFTO Form 781A. If FOD is encountered, notify his/her supervisor who will ensure impoundment procedures are implemented IAW this volume. An investigation will be initiated according to AFI 91-204.

14.68.3.9.1.4. (Added) Ensure all equipment, aircraft, and personnel are clear of the engine run-up area, including the area up to 150 feet to the rear of any aircraft being operated above 85 percent NG.

14.68.3.9.1.5. (Added) Brief all crew members on the operation being performed prior to engine start and review all emergency and ground egress procedures. Ensure all crew members are fully qualified for the positions to which they are assigned.

WARNING: (Added) ALL PAPER AND TAPE WILL BE REMOVED FROM THE AIRCRAFT CANOPY AND WINDSCREEN PRIOR TO ANY ENGINE OPERATION.

14.68.3.9.1.6. (Added) Perform a FOD walk, covering the immediate area around the aircraft intake.

14.68.3.9.1.7. (Added) Obtain engine run clearance through 309 AMXG Control Center. The 309 AMXG Control Center will require the following information before clearance can be granted:

14.68.3.9.1.7.1. (Added) Aircraft tail number and parking spot.

14.68.3.9.1.7.2. (Added) Name of the individual occupying the pilot's seat.

14.68.3.9.1.8. (Added) 309 AMXG. Contact "Hill Ground" via the aircraft UHF radio (frequency 275.8) for clearance prior to engine starts. Inform them of any special requirements, approximate run time, and whether the run will be an idle or maximum power run. The run crew will maintain contact with the tower on UHF frequency 275.8 during the entire engine run and inform them of engine run termination. When the tower is closed (before 0900 or after 2200 hours); engine run personnel will maintain contact with 309 AMXG Control Center (UHF 275.8).

14.68.3.9.1.9. (Added) 309 AMXG A/OA-10A engine run technicians will notify the 309 AMXG Control Room when the engine run has been cancelled or terminated.

14.68.3.9.1.10. (Added) Ensure A/OA-10A aircraft has position lights turned to "FLASH".

14.68.3.9.1.11. (Added) Ensure intake plugs are installed after the engine run is completed.

14.68.3.9.1.12. (Added) After engine shutdown, ensure the required AFTO Form 781A entries are made for all discrepancies encountered during the run.

14.68.3.9.2. (Added) AMXG. The responsibilities of a ground controller who has completed training requirements in paragraph 14.68.3.7. will include the following:

14.68.3.9.2.1. (Added) Advise the engine run technician of any other aircraft, vehicles, or personnel entering the exhaust blast area, or if any adverse condition develops; i.e., fire, oil, leak, etc., and, if necessary, direct power reduction to prevent injury or damage.

14.68.3.9.2.2. (Added) Be equipped with a 150-pound Halon fire extinguisher or 2 x 50 lb. CO2 fire extinguishers within the aircraft run area. Should a fire develop, the ground controller will not approach the engine intake area until the engine has been shut down.

14.68.3.10. (Added) For engine operations above 85 percent, all requirements in paragraph

14.68.3.12. (Added) Of this instruction will be accomplished along with the following additional requirements:

14.68.3.10.1. (Added) The aircraft will be positioned in a spot approved for high power engine runs.

14.68.3.10.2. (Added) To prevent engine FOD during engine runs, all panels within 8 feet forward of the engine intake will be completely installed. Personnel will not be allowed on top of the aircraft at anytime during the run.

14.68.3.11. (Added) 309 AMXG A/OA-10A Engine Run Locations: *Low power engine runs* are defined as an engine run not to exceed 85 percent rpm.

CAUTION: (Added) IF THE SAFETY ZONE BEHIND AN AIRCRAFT WITH RUNNING ENGINES IS VIOLATED (WITHIN 150 FEET), OR TRAFFIC MOVES WITHIN 50 FEET IN FRONT OF THE AIRCRAFT, OR ANY EMERGENCY VEHICLE IS SIGHTED APPROACHING THE AIRCRAFT, THE GROUND OBSERVER WILL NOTIFY THE RUN SUPERVISOR. THE RUN SUPERVISOR WILL IMMEDIATELY RETURN THE ENGINES TO IDLE SETTINGS UNTIL SUCH AREAS ARE CLEARED TO CAUTION.

14.68.3.12. (Added) 309 AMXG "*High Power Engine Run Locations*" for the A/OA-10A include only an approved restraint site.

14.68.3.13. (Added) 309 AMXG. In inclement weather when a hazard exists such as blowing snow, slippery conditions, or reduced visibility, high power engine operations will immediately be terminated until the hazard no longer exists.

14.68.4. (Added) 309 AMXG. A/OA-10 Aircraft:

14.68.4.1. (Added) Technical Order (TO) requirements: All ground engine operations will be conducted IAW TO 1A-10()-2-71JG-2 and 1A-10A-2-71JG-2CL-1, *Org Maint Checklist -- Power Plant -- Power Plant/Apu Opr.*

14.68.4.2. (Added) 309 AMXG General Procedures:

14.68.4.2.1. (Added) Limitations/Requirements:

14.68.4.2.1.1. (Added) Brake pressure must be available at all times except when aircraft restraining bridle is installed. This may be accomplished by operating the engine.

14.68.4.2.1.2. (Added) Single engine runs up to 85 percent core rpm may be accomplished in the designated parking spots with a ground observer.

14.68.4.2.1.3. (Added) During APU operations, a qualified operator will remain in the immediate vicinity of the aircraft with a fire bottle readily available.

14.68.4.2.1.4. (Added) APU operators will be at least a grade 10 skill level and have completed APU training.

NOTE: (Added) 309 AMXG, if a retraining bridle or tie down is not available, a pilot may perform ground maintenance runs, as required.

14.68.5. (Added) 309 AMXG F-22 Aircraft "Engine Run Qualifier", Training Requirements and Responsibilities: All assigned personnel tasked to operate installed F-22 engines will be qualified and certified IAW this document before they may accomplish engine runs for the 309 AMXG. All personnel involved in the qualification and certification process will ensure all policies stated in this document are followed.

14.68.5.1. (Added) To be certified as a 573 AMXS/MXDPADC engine run qualifier, a person must be a certified F-22 engine run technician as outlined in paragraph 14.68.5.4. of this document, and satisfy the following additional requirements:

14.68.5.1.1. (Added) Have a minimum of 6 months engine run experience on F-22 aircraft.

14.68.5.1.2. (Added) Must be qualified to run F119PW100 Pratt & Whitney engine.

14.68.5.1.3. (Added) Be a WG-11 8852, or higher.

14.68.5.1.4. (Added) Be certified by an F-22 instructor pilot (when possible), or another certifying official.

14.68.5.1.5. (Added) The engine run qualifier will instruct training for engine run technicians annually.

14.68.5.2. (Added) 309 AMXG Qualifier Responsibilities:

14.68.5.2.1. (Added) Qualify F-22 engine run technicians according to procedures outlined in paragraph 14.68.5.4. and AFI 11-218_AFMC_SUP1.

14.68.5.2.2. (Added) Ensure the system of monitoring currency of engine run certified technicians is in place and adequate to identify any engine run technician that has not maintained currency IAW paragraph 14.68.5.8.

14.68.5.2.3. (Added) Ensure individuals are immediately decertified in the event that engine run currency lapses or any required training has expired. Ensure re-qualification is granted only after the deficiency is corrected and requirements are satisfied.

14.68.5.2.4. (Added) Conduct spot inspections to verify and ensure engine run proficiency. Ensure documentation templates and/or locally developed forms for evaluations are developed and on file for qualifier use.

14.68.5.3. (Added) 309 AMXG F-22 Aircraft Engine Run Training Requirements: The first-level supervisor must determine that a requirement exists for an engine run position in their area before proceeding with the training/certification procedure.

14.68.5.4. (Added) 309 AMXG. To be certified as an F-22 engine run technician, a person must:

14.68.5.4.1. (Added) Be certified as an F22 engine run technician a person must be a WG-8852-11 or higher.

14.68.5.4.2. (Added) Complete all training requirements as outlined in paragraph **14.68.5.5.** Have 1 year F-22 experience or similar MDS and 6 months flight line experience on F-22 aircraft or similar MDS, complete the F-22 Commons Course (course code J4AMP30000A27A PACS Code 2093), F-22 Egress/Cockpit Familiarization Course(PACS Code 2093, 2568), Course (course code 2289) administered by 309 AMXG/OBH. Successfully complete Aircraft Marshalling (course code 0899) IAW AFI 11-218 AFMC Sup 1, to include visual marshalling signals, emergency visual signals, ground oriented emergency procedures, and F-22 Engine Inlet Inspection (course code 1246).

14.68.5.4.3. (Added) Is PAC certified to operate the Intercom System (ICS) and UHF radio systems. Active duty military must be qualified through documentation in their AF Form 623, Individual Training Record. Have successfully completed engine run training course "F-22

Engine Run Procedures for F119PW/100 Pratt and Whitney Engine” (course code xxx), the written test described in paragraph 14.68.5.4.4. will not be scheduled until satisfactory completion of this course.

14.68.5.4.4. (Added) Be qualified by the 571 AMXG/MXADPA F-22 engine run qualifier IAW paragraph 14.68.5.6. (Added) Of this document and certified by their supervisor. Complete a written test, administered by the 309 AMXG Resources Management Section (309 AMXG/OBR), with a minimum total score of 85 percent correct (corrected to 100 percent) and score 100 percent on all emergency procedures.

14.68.5.4.5. (Added) Successfully completed an initial simulator training course.

14.68.5.5. (Added) 309 AMXG F-22 Engine Run Training:

14.68.5.5.1. (Added) A training run (engine not running) with the engine run qualifier will be accomplished prior to the engine running certification. This will be accomplished in the F-22 aircraft cockpit.

14.68.5.5.2. (Added) The dry training run (engine not running) will include all power settings for knowledge, skill, and proficiency demonstration. Emergency procedures will be included.

14.68.5.5.3. (Added) Review applicable publications listed in Attachment 14.68.A4.: F-22 Engine Run Qualification, of this document with the engine run qualifier prior to beginning the practice run.

14.68.5.5.4. (Added) All F-22 initial training runs will be on the flight line. The qualifier will supervise the run from the ground in contact with the run person at all times via the aircraft intercom system.

14.68.5.6. (Added) 309 AMXG Engine-run certification procedure after completion of all training requirements:

14.68.5.6.1. (Added) Demonstrate engine start and engine run proficiency to the satisfaction of the engine run qualifier, according to AFI 11-218 AFMC Sup 1.

14.68.5.6.2. (Added) The qualifier will verify completion and documentation of all academic training requirements in paragraph 14.68.5.4.

14.68.5.6.3. (Added) Recertification will be accomplished annually from the last certification date by completing the following requirements:

14.68.5.6.3.1. (Added) Re-accomplish the written test, administered by 309 AMXG/OBST, with a minimum total score of 85 percent correct (corrected to 100 percent) and score 100 percent on all bold-faced and emergency procedures.

14.68.5.6.3.2. (Added) Complete a refresher simulator training course.

NOTE: (Added) 309 AMXG; if simulator time is difficult to schedule for annual requalification, this may be performed in a live cockpit in lieu of a simulator session. If this option is used, the mechanic shall complete qualification training in a simulator at least every 3 years.

14.68.5.6.4. (Added) 309 AMXG. Failure to satisfactorily complete these requirements will result in immediate de-certification until all deficiencies are corrected.

14.68.5.7. (Added) 309 AMXG. To be qualified for the "ground controller" position, a person must:

14.68.5.7.1. (Added) Be a WG-8852/2892-10 or higher.

14.68.5.7.2. (Added) Be Aircraft Marshalling qualified and have 90 days F-22 flight line experience.

14.68.5.7.3. (Added) Successfully complete a fire extinguisher training course.

14.68.5.8. (Added) 309 AMXG F-22 90-Day Engine Run Currency Requirements:

14.68.5.8.1. (Added) Engine run technicians are required to complete a minimum of one engine run every 90 days. It is the technician's responsibility to maintain currency.

14.68.5.8.2. (Added) Run technicians will be responsible to annotate their engine runs in the engine run logbook located at the F-22 first-level supervisor's desk area. First-line supervisor will check currency of run technician in PAC prior to run and will update 90-day run currency in PAC after completion of run. Failure to maintain currency will result in immediate decertification.

14.68.5.9. (Added) 309 AMXG; Minimum F-22 Engine Run Crew Requirements and Responsibilities, for F-22 Engine Operations on the 309 AMXG Flight line, there must be:

WARNING: (Added) F-22 ENGINE RUNS ON THE FLIGHTLINE WILL NOT EXCEED 80 PERCENT REVOLUTION PER MINUTE (RPM)

14.68.5.9.1. (Added) A certified engine run technician in the pilot's seat. The engine run technician's responsibilities will include the following:

14.68.5.9.1.1. (Added) Overall supervision of the engine run operation.

14.68.5.9.1.2. (Added) Ensure the aircraft is prepared for the engine run IAW applicable technical data and that all technical data required for troubleshooting is available prior to engine start.

WARNING: (Added) WHEN RUNNING ENGINES DURING ICE FOD CONDITIONS, THE GROUND OBSERVER WILL BE POSITIONED TO WATCH THE INTAKE LIP FOR ICE FORMING. IF ANY AMOUNT OF ICE BEGINS TO ACCUMULATE ON ACFT INLET LIP OR ASSERTION OF INLET ICE ICAW, THE GROUND OBSERVER WILL IMMEDIATELY DIRECT THE RUN TECHNICIAN TO SHUT DOWN. DO NOT RESTART UNTIL ICING CONDITION NO LONGER EXIST.

14.68.5.9.1.3. (Added) Accomplish and document a pre- and post-engine maintenance run intake and exhaust inspection in Forms section of the Integrated Maintenance Information System (IMIS). If FOD is encountered, notify his/her supervisor who will ensure impoundment procedures are implemented IAW chapter 9B of AFI 21-101 AFMC Sup 1. An investigation will be initiated according to AFI 91-204.

14.68.5.9.1.4. (Added) Ensure all equipment, aircraft, and personnel are clear of the engine run-up area, including the area up to 350 feet to the rear of any aircraft being operated above idle.

14.68.5.9.1.5. (Added) Brief all crew members on the operation being performed prior to engine start and review all emergency and ground egress procedures. Ensure all crew members are fully qualified for the positions to which they are assigned.

WARNING: (Added) ALL PAPER AND TAPE WILL BE REMOVED FROM THE AIRCRAFT CANOPY PRIOR TO ANY ENGINE OPERATION.

WARNING: (Added) TO PREVENT ENGINE FOD DURING ENGINE RUNS, ALL PANELS WITHIN 10 FEET AFT AND ALL PANELS FORWARD OF THE ENGINE INTAKE WILL BE COMPLETELY INSTALLED. PERSONNEL WILL NOT BE ALLOWED ON TOP OF THE AIRCRAFT AT ANY TIME DURING THE RUN.

14.68.5.9.1.6. (Added) Perform a FOD walk, covering an area 50 feet forward of the aircraft intake.

14.68.5.9.1.7. (Added) Obtain engine run clearance through the 309 AMXG Control Center. The 309 AMXG Control Center will require the following information before clearance may be granted:

14.68.5.9.1.7.1. (Added) Aircraft tail number and parking spot.

14.68.5.9.1.7.2. (Added) Name of the individual occupying the pilot's seat

14.68.5.9.2. (Added) 309 AMXG; Contact "Hill Ground" via the aircraft UHF radio (frequency 275.8) for clearance prior to engine start. Inform them of any special requirements, approximate run time, and whether the run will be an idle or maximum power run. The run crew will maintain contact with the tower on UHF frequency 275.8 during the entire engine run and inform them of engine run termination. When the tower is closed (before 0900 or after 2200 hours), engine run personnel will maintain contact with the 309 AMXG Control Center (UHF 275.8).

14.68.5.9.2.1. (Added) If the engine run is a first run after major fuel system maintenance, request a fire truck through 309 AMXG Control Center and ensure the fire truck is in position prior to engine start.

14.68.5.9.2.2. (Added) Ensure F-22 aircraft has wing tip and anti-collision lights turned "ON".

14.68.5.9.2.3. (Added) After engine shutdown, ensure the required IMIS entries are made for all discrepancies encountered during the run.

14.68.5.9.3. (Added) The 309 AMXG responsibilities of a ground controller who has completed training requirements in paragraph 14.68.5.7. of this instruction will include the following:

14.68.5.9.3.1. (Added) Ground communication with run technician at all times.

14.68.5.9.3.2. (Added) Advise the engine run technician of any other aircraft, vehicles, or personnel entering the exhaust blast area, or if any adverse condition develops; i.e., fire, oil, leak, etc., and, if necessary, direct power reduction to prevent injury or damage.

14.68.5.9.3.3. (Added) Be equipped with a 150-pound Halon fire extinguisher or equivalent within the aircraft run area. Should a fire develop, the ground controller will not approach the engine intake area until the engine has been shut down.

14.68.5.10. (Added) 309 AMXG; F-22 parking spots on the 309 AMXG flight line are designated as "*Low Power Engine Run Locations*". *Low power* is defined as an engine run not to exceed 80 percent revolutions per minute (rpm).

NOTE: (Added) 309 AMXG "*High Power Engine Run Locations*" for the F-22 currently do not exist at Hill AFB. Aircraft that require power settings above 80 percent will be accomplished by a certified F-22 pilot with coordination through Base Operations.

CAUTION: (Added) IF THE SAFETY ZONE BEHIND AN AIRCRAFT WITH RUNNING ENGINES IS VIOLATED (WITHIN 200 FEET), OR TRAFFIC MOVES (WITHIN 50 FEET) IN FRONT OF THE AIRCRAFT, OR ANY EMERGENCY VEHICLE IS SIGHTED APPROACHING THE AIRCRAFT, THE GROUND OBSERVER WILL NOTIFY THE RUN SUPERVISOR. THE ENGINE RUN SUPERVISOR WILL IMMEDIATELY RETURN ENGINE TO IDLE SETTING UNTIL SUCH AREAS ARE CLEARED.

14.68.6. (Added) 309 AMARG Engine Systems Status.

14.68.6.1. (Added) General. This system provides status for all engines physically located at 309 AMARG. Engine status provides inventory visibility, current engine reporting status, and 309 AMARG aircraft status (for installed or obligated engines) at any given time. 309 AMARG engine status and aircraft status are the same for obligated engines. It also provides location data of all engines, operating hours since overhaul, owning service, and project assignment.

14.68.6.2. (Added) 309 AMARG Responsibilities.

14.68.6.2.1. (Added) The 309 AMARG Engine Manager (EM) will:

14.68.6.2.1.1. (Added) Serve as point of contact for all matters concerning the operation of the 309 AMARG engine status system.

14.68.6.2.1.2. (Added) Perform the engine management functions cited in TO 00-25-254-1, *Comprehensive Engine Management System Engine Configuration, Status and TCO Reporting Procedures* and NAVAIRINST 13700.15B, *Aircraft Engine Management System (AEMS), Naval Air Systems Command Instruction*.

14.68.6.2.1.3. (Added) Coordinate with the DMAG Management Division, 309 AMARG/OBR, and Workload Division, 309 AMARG/OBW, Aerospace Vehicle Disposition Office (AVDO) when discrepancies are found between the Aircraft Status System and the Engine Status System.

14.68.6.2.1.4. (Added) Assign engine ID upon receipt of engines at 309 AMARG. EM maintains a log of every type ID that is assigned.

14.68.6.2.1.5. (Added) Assign unobligated or uninstalled engines to engine reclamation projects upon notification from 309 AMARG/OBW.

14.68.6.2.1.6. (Added) Provide the 577 CMRS Production A Flight a list of engines selected for engine reclamation projects.

14.68.6.2.2. (Added) 309 AMARG/OBW is responsible for acceptance of all engine reclamation projects and preparation of sales orders.

14.68.6.2.3. (Added) 577 CMRS, Production A Flight Planner will process Production Work Order (PWO) for each engine assigned to the project.

14.68.6.2.4. (Added) The Aircraft Division, F-4 Flight, Propulsion Section 576 AMRS/MXDPBB (Comprehensive Engine Management System Computer Database) and Reclamation Flight will prepare an AF Form 1534, *CEM CDB Report*, and/or via E-mail, notify the EM for reporting action.

14.68.6.2.5. (Added) Disposal Flight will forward a copy of the transferred document to the EM when aircraft are transferred or donated to other activities.

14.68.6.3. (Added) 309 AMARG Procedures.

14.68.6.3.1. (Added) Preparation of Engine Status Inputs. Engine status inputs are required for all engines in the possession of 309 AMARG to be placed in the 309 AMARG Business System (ABS). The 309 AMARG Engine Status includes all data elements required by TO 00-25-254-1 for Air Force Engines and NAVAIRINST 13700.15B for Navy engines. Since command reporting procedures have not been established for reporting Army and Coast Guard engines, Army engines will be loaded by Air Force procedures and Coast Guard engines by Navy procedures.

14.68.6.3.2. (Added) New Aircraft Arrivals.

14.68.6.3.2.1. (Added) 309 AMARG/OBW will input aircraft project and category of storage per direction of owning service.

14.68.6.3.2.2. (Added) The 309 AMARG/OBW, AVDO will assign a 309 AMARG ID number to aircraft arriving at 309 AMARG, and load into the 309 AMARG ABS. An e-mail from the Oracle System will be sent to the EM with the Equipment Status Change, (EQ Status Report) to provide the necessary data needed to process engines into the ABS.

14.68.6.3.3. (Added) Engines Maintained by 309 AMARG. All engines will be loaded in the ABS. Upon notification from Aircraft Receiving Branch EM will:

14.68.6.3.3.1. (Added) Assign an 309 AMARG ID number for each engine received.

14.68.6.3.3.2. (Added) Prepare AF Form 1534, for each Air Force engine. There is no form for Navy Engines; just use a blank sheet of paper and process directly into AEMS System.

14.68.6.3.3.3. (Added) Load engines in the ABS.

14.68.6.3.3.4. (Added) Compare input data from EQ Status Report email the next day to ensure accuracy.

14.68.6.3.4. (Added) Uninstalled Engine Arrivals. Engines may arrive at 309 AMARG to be reinstalled on aircraft in support of fly-away, reclamation, or Jet Engine Intermediate Maintenance (JEIM) support for other projects. Engines will be received by the Special Assets Branch (MATO). MATO will ensure there are records for each serviceable engine remove records and forward them to the EM. Check container pressure for 5 pounds and humidity indicator for blue color. Ensure the DD Form 1348-1A, *Issue/Turn-In Request*, is with the engine. If not provide a copy of the Government Bill of Lading (GBL), annotate the engine serial number, date and time it was received and forward to EM. Engines other than serviceable condition do not require engine records for pressure check.

14.68.6.3.4.1. (Added) MATO will place engines in a temporary storage area pending disposition instructions from the EM.

14.68.6.3.4.2. (Added) The 309 AMARG EM will:

14.68.6.3.4.2.1. (Added) Coordinate with 309 AMARG/OBW and Storage Division scheduler to schedule movement of engines.

14.68.6.3.4.2.2. (Added) Prepare an AF Form 1534 for receipt of Air Force engines or process in Aerospace Engine Management System (AEMS) for Navy engines. Army and Coast Guard engines are processed in the ABS only and do not require forms.

14.68.6.3.4.2.3. (Added) Assign 309 AMARG engine ID number.

14.68.6.3.4.2.4. (Added) Load in the ABS.

14.68.6.3.4.2.5. (Added) Coordinate with 309 AMARG/OBW for funding and sales order and respective division's production controller/expeditor for scheduling action.

14.68.6.3.4.2.6. (Added) Notify the Propulsion Branch, 309 AMARG/OBW of engine availability if the engine is a spare to support a fly-away project, or JEIM support.

14.68.6.3.4.2.7. (Added) For engines received for reclamation projects:

14.68.6.3.4.2.7.1. (Added) 309 AMARG/OBW will notify EM of reclamation project code.

14.68.6.3.4.2.7.2. (Added) EM will provide 309 AMARG/OBW with engine serial numbers and engine ID.

14.68.6.3.4.2.7.3. (Added) 309 AMARG/OBW will prepare a sales order or amend the sales order to include new engines.

14.68.6.3.5. (Added) 309 AMARG Aircraft departing with obligated engines.

14.68.6.3.5.1. (Added) Engines installed on departing aircraft will automatically be deleted via aircraft 309 AMARG status flag processed by 309 AMARG/OBW.

14.68.6.3.5.2. (Added) The EM will be notified by 309 AMARG/OBW of aircraft departing overland that have uninstalled/obligated engines. The EM will de-obligate and delete engines from the aircraft cross-reference record and prepare shippers if engines are to go with aircraft.

14.68.6.3.6. (Added) 309 AMARG Engine Status Changes. Obligated uninstalled/unobligated engines:

14.68.6.3.6.1. (Added) The computer will automatically update the data on obligated engines which are common to aircraft when 309 AMARG/OBW, Aerospace Vehicle Control Officer changes locations or projects changes.

14.68.6.3.6.2. (Added) Packaging and Shipping staff will deliver the shipping document to the 355 Logistics Readiness Squadron (LRS), Traffic Management Flight (355 LRS/LGRT), and holding one copy in suspense. Attach a copy of the GBL and return the form to the EM the same day the engine is shipped or no later than the following morning. This requirement also applies to engines installed on or shipped with an aircraft departing by surface shipment.

14.68.6.3.6.3. (Added) The EM will ensure changes are input in the ABS.

14.68.6.3.6.4. (Added) Tooling will place uninstalled engines in location and provide a list of engines with its new location to the storage flight and EM.

14.68.6.3.7. (Added) 309 AMARG Inventories.

14.68.6.3.7.1. (Added) 309 AMARG Retail Supply. The inventory uses the Access Report from the ABS to document all aircraft engines in engines location sequence with the option to select specific customers (Air Force, Navy, Army and Coast Guard), and obligated/unobligated and installed/uninstalled engines located at 309 AMARG.

14.68.6.3.7.2. (Added) Annually, 309 AMARG Retail Supply Program Manager and the EM will schedule and perform a physical inventory of all engines not on reclamation projects, checking each engine and aircraft by ID number.

14.68.6.3.8. (Added) 309 AMARG Aircraft Engine Reclamation.

14.68.6.3.8.1. (Added) Dedicated engines will be reclaimed as part of the aircraft reclamation project when complete engines are not required. All parts removal time will be charged to the aircraft PWO.

NOTE: (Added) 309 AMARG. The owning service will pay for unobligated engine reclamation.

14.68.6.3.8.2. (Added) Unobligated engines will be reclaimed as end items on engine reclamation projects. Upon receipt of a project PWO, the EM will:

14.68.6.3.8.2.1. (Added) Change engines to the appropriate project in ABS and change status to PC. Type out Form 1348-1A document with an *MM transferring the engine from the Engine Management FJ2373 account to the Aircraft Disposition Officer FR2373 account. The EM will forward the *MM to Disposal Flight.

14.68.6.3.8.2.2. (Added) Prepare AF Form 1534 to drop accountability for each engine dedicated to the project, i.e., (1M2191), as documented in the Supply Record Account Number Directory, or AEMS for Navy engines.

14.68.6.3.8.2.3. (Added) Provide a list of engines to be removed or reclaimed to the reclamation flight planners. The list will include engine serial number, location, and 309 AMARG ID number.

14.68.6.3.8.2.4. (Added) When notified by the reclamation flight to put a particular engine in work, change the status to "PD" (in work) in the ABS. Process AF Form 1534 in Comprehensive Engine Management System (CEMS) for each engine.

14.68.6.3.8.2.5. (Added) Using the master copy of a PWO, change status to "PA" (removals completer) in the ABS on the last working day of the month. The computer program automatically changes the status to "PJ" completed, not transferred to the DRMO, then to "UH" because all engines are transferred to DRMO as scrap.

14.68.6.4. (Added) 309 AMARG Reports and Products. Reports required in the Engine Status System and products necessary to manage engines in the 309 AMARG inventory are as follows:

14.68.6.4.1. (Added) Propulsion Unit Operating Time and Reconciliation Report (PCN: CED042, BUA510, A10Q_quarterly; and CED042, 8A510.A20Q semiannually), this report is extracted from AF Form 1534 in two parts and is applicable to Air Force engines only. Part I applies to active units.

14.68.6.4.1.1. (Added) Part I is the operating time on in-use reportable engines and is required each calendar quarter. Data is extracted from AF Forms 1534 for each operational engine, and

input via CEMS for transmission to Computerized Data Base (CDB), Tinker AFB, and Oklahoma (OK).

NOTE: (Added) 309 AMARG is not an active base so this part does not apply to us unless the engine is flown before it departs 309 AMARG.

14.68.6.4.1.2. (Added) Part II is the semiannual engine reconciliation due in April and October. This report is obtained from OC-ALC/TILC through an email from Tinker AFB. The report is transmitted electronically upon request from the CEMS direct to EM by email. The ABS database administrator will use the list and run a comparison list with the ABS and send the comparison list to EM to make corrections in both data bases.

14.68.6.4.2. (Added) 309 AMARG Reconciliation Reports for Navy, Army, and Coast Guard.

14.68.6.4.2.1. (Added) Reconciliation of Navy engines will be accomplished according with the Interservice Support Agreement, upon receipt of the reconciliation listing from the Naval Inventory Control Point, Detachment Flight Safety Office (FSO).

14.68.6.4.2.2. (Added) No reconciliation requirements have been established for Army or Coast Guard engines.

14.68.6.4.3. (Added) 309 AMARG the EM will provide a list of specific Type Model Series Engine to Item Managers as requested. The list is provided through Microsoft Access file linked to the ABS.

14.68.6.4.3.1. (Added) The EM will notify the Engine Item Manager (EIM) of excess aircraft and send a list by email requesting disposition of engines.

14.68.6.4.3.2. (Added) The EIM will provide disposition instructions for the EM to take appropriate action. The EM will transfer the engines for FJ2373 account to the 1M2191 account in CEMS.

14.68.6.4.3.3. (Added) AF Form 1534 *CEM CDB Report*; CEMS Central Database

14.68.7. (Added) See following Attachments:

14.68.7.1. (Added) 14.68.A1, C-130 Engine Run Qualification

14.68.7.2. (Added) 14.68.A2, F-16 Engine Run Qualification

14.68.7.3. (Added) 14.68.A3, A-10 Engine Run Qualification

14.68.7.4. (Added) 14.68.A4, F-22 Engine Run Qualification

14.68.7.5. (Added) 14.68.A5, Hush House Operation Instructions

14.69. (Added) Joint Oil Analysis Program (JOAP): 309 AMARG Responsibilities. The storage (Receiving) and aircraft (Aircraft) squadrons will each appoint an oil analysis program (OAP) monitor in writing to perform the functions required by this program. The letter will be updated annually or as needed and will include grade, name, duty and fax phone numbers. Send the letter to the 355th Equipment Maintenance Squadron, Fabrication Flight, Non-Destructive Inspection (NDI) Unit (355 EMS/MXMFN), JOAP laboratory (lab) and 162 FW/MSM, Materials Lab (355/EMS).

14.69.1. (Added) The OAP monitors will: Assist 578 SDS/MXDPAB personnel to resolve problems and questions regarding the oil analysis program.

14.69.1.2. (Added) Ensure compliance and implementation of this program.

14.69.1.3. (Added) Train personnel in the methods of obtaining oil samples to ensure sampling is performed IAW TO's 33-1-37, *Joint Oil Analysis Program Laboratory Manuals*, Volumes I through IV.

14.69.2. (Added) 309 AMARG Procedures.

14.69.2.1. (Added) Special (Red Cap/Red Tagged) OAP samples will be taken from all aircraft with the following conditions:

14.69.2.1.1. (Added) Those arriving with engine, transmission or gearbox malfunctions.

14.69.2.1.2. (Added) At any indication of oil wetted system component malfunction, excessive oil use, oil fluctuation or low pressure.

14.69.2.1.3. (Added) Those processing for flyaway following the final engine run and after each functional check flight (FCF).

14.69.2.1.4. (Added) Arrivals in project categories XS (Inviolate Storage), XT (Security Assistance Program) or XV (Storage High Probability of Withdrawal) or the aircraft that have low-time engines identified for removal to be sent to operational organizations. *Exception:* Aircraft being processed for 4000 type *no-save engine*.

14.69.2.2. (Added) 309 AMARG. During aircraft process-in, 578 SDS/MXDPAB will:

14.69.2.2.1. (Added) Take two OAP samples after engine shut down IAW TO 33-1-37 series for all aircraft arriving at 309 AMARG and those criteria in paragraph 2.1. One sample is sent to the 355 EMS/MXMFN, JOAP lab for wear metals testing and one sample is sent to 162 MXM/MXMFN for testing total acid number, water and particulate contamination.

14.69.2.2.2. (Added) Prepare the DD Form 2026, *Oil Analysis Request*, for the sample destined for the 355 EMS/MXMFN, JOAP lab. All the entries are self-explanatory except the following:

Table 1. (Added) Mandatory DD Form 2026 Entries.

BLOCK	MANDATORY ENTRY
OIL ANALYSIS LABORATORY	355 EMS/MXMFN
OPERATING ACTIVITY	Aerospace Maintenance & Regeneration Center Davis-Monthan AFB AZ 85707-4334

14.69.2.2.3. (Added) Prepare an *Engine/CSD Oil Analysis*, Constant Speed Drive (CSD) for the sample destined for 162 MXM/MXMFN.

14.69.2.2.4. (Added) Date and PAC stamp the WCD or other WCDs when the samples are taken.

14.69.2.2.5. (Added) Give the OAP samples, the DD Forms 2026 and the *Engine/CSD Oil Analysis*, to the OAP monitor.

14.69.2.3. (Added) During processing out of 576 AMRS aircraft, F-4, A-10 miscellaneous regeneration and flight line support flights will:

14.69.2.3.1. (Added) Take an OAP sample following the Green run (initial engine run after rebuilt), the final engine run and after all FCFs and prepare one copy of the DD Form 2026.

14.69.2.3.2. (Added) Follow the procedures in paragraphs 2.2.1. through 2.2.5. but give the sample and form to the 576 AMRS OAP monitor.

NOTE: (Added) Only one sample is required to send to the 355 EMS/MXMFN for wear metals testing.

14.69.2.4. (Added) The Propulsion Section personnel, during test cell operations, will:

14.69.2.4.1. (Added) Perform an initial OAP sample run and a final (acceptance) OAP sample run.

14.69.2.4.2. (Added) Follow the procedures in paragraphs 2.2.1. through 2.2.5. but give the sample and form to the 576 AMRS OAP monitor.

NOTE: (Added) Only one sample is required to send to the 355 EMS/MXMFN for wear metals testing.

14.69.2.5. (Added) The Receiving and Process Out OAP monitors will:

14.69.2.5.1. (Added) Ensure the DD Forms 2026 and *Engine/CSD Oil Analysis*, are correct and complete.

14.69.2.5.2. (Added) Ensure daily pickup of the DD Form 2026 or *Engine/CSD Oil Analysis*, and oil samples by the Motor Pool Taxi Section.

14.69.2.5.3. (Added) When notified of any discrepancies found during analysis:

14.69.2.5.3.1. (Added) The 576 AMRS will ensure the information is entered in the project workbook's WCD by the crew chief during processing out and a copy of the test results are entered in the aircraft records.

14.69.2.5.3.2. (Added) Receiving will notify the planner to enter the discrepancy in the project workbook's WCD.

NOTE: (Added) No corrective action will be taken with discrepancies until aircraft withdrawal, engine removal or otherwise directed.

14.69.2.6. (Added) The Motor Pool Taxi will pick up the OAP samples and forms daily from the squadron monitors and deliver the samples with the DD Forms 2026 to the 355 EMS/MXMFN, JOAP lab. The samples for 162 MXM/MXMFN lab must have a form attached.

14.69.2.7. (Added) 162 MXM/MXMFN will e-mail the test results to the generating work center and to the Resource Management Division, TO library/records squadron and aircraft records. The results are faxed to the work center if the e-mail is not available.

14.69.2.8. (Added) The work center OAP monitor will:

14.69.2.8.1. (Added) Send a copy of any faxed results to aircraft records.

14.69.2.8.2. (Added) Tag units (i.e., engines, constant speed drives) exceeding the OAP sample metal wear, water, TAN and other contaminate limits, and annotate the date if the sample originated with 578/MXDPAB during process-in.

14.69.2.9. (Added) 309 AMARG/QPQL Aircraft Records will file the test results with the appropriate aircraft or engine record file.

14.69.3. (Added) 309 **AMXG JOAP.** The primary purpose is to establish, describe, and assign responsibility and procedures for the JOAP for F-16, F-22, and A-10 engines assigned to the 309th Aircraft Maintenance Group. It is intended to supplement existing JOAP guidance references and provide basic procedures where none exist. This Instruction also provides additional information to support the 309th AMXG Quality Plan.

14.69.3.1. (Added) 309 AMXG Responsibilities. 573 AMXS/MXDXAD

14.69.3.1.1. (Added) The aircraft planning flights (573 AMXS/MXDAA (A-10) and 573 AMXS/MXDXAD (F-16) will prepare necessary work control documents to accomplish sample taking as required by conditions listed in the applicable TO, this supplement, and other applicable directives pertaining to aircraft engines.

14.69.3.1.2. (Added) Aircraft Receiving Element 573 AMXS/MXDPADB will:

14.69.3.1.2.1. (Added) Draw oil sample on arriving A-10, F-16 and F-22 aircraft with reference to weapons-specific TOs.

14.69.3.1.2.2. (Added) Fill out DD Form 2026 using the aircraft forms.

14.69.3.1.2.3. (Added) Pick up DD Form 2027 or automated OAP records from Flight Test Forms and Records 573 AMXS/MXDAA, 571 AMXS/MXDPABA or 573 AMXS/MXDPADC for newly received aircraft.

14.69.3.1.2.4. (Added) Ensure oil samples, DD Form 2027, and DD Form 2026 are delivered to the Chemical Laboratory Flight (809 MXSS/MXDEC), Building 100. **NOTE:** Red Caps (requested by 809 MXSS/MXDEC, Building 100) will be handled on an individual basis any time of the day because of their urgency. Red Cap actions will be coordinated through the 309 AMXG/MOC, Control Center, Building 225.

14.69.3.1.3. (Added) 573 AMXS/MXDAA and 573 AMXS/MXDPADC in Building 233 will:

14.69.3.1.3.1. (Added) Screen the incoming records jacket for the DD Form 2027 or automated OAP records and attach it to the initial OAP sample. 573 AMXS/MXDAA will contact the using activity if forms are not included.

14.69.3.1.3.2. (Added) Pick up all documents pertaining to each individual aircraft prepared by 809 MXSS/MXDEA, Building 100, prior to aircraft delivery.

14.69.3.1.3.3. (Added) Prior to aircraft departure, 573 AMXS/MXDAA will insert in the aircraft 781 records jacket (in front of jacket), the mailing address and telephone number of 809 MXSS/MXDEA.

14.69.3.1.3.4. (Added) 573 AMXS/MXDAA will place copy of DD Form 2027 or automated OAP records in the aircraft 781 records jacket (in front of jacket) prior to aircraft delivery. They will also ensure the ferry pilot knows the location of the forms.

14.69.3.1.4. (Added) 571 AMXS/MXDPABA and 573 AMXS/MXDPADC, Building 233, will:

14.69.3.1.4.1. (Added) Make a logbook entry on all oil samples taken from A-10 and F-16 aircraft that are the responsibility of 309 AMXG/MOC. The logbook is located in the 309

AMXG/MOC , Building 225. Logbook information will include: aircraft serial number, engine serial number, date sample was taken, results of the test, and date and time the results are recorded. Samples will be taken from incoming, routine, Red Caps, and FCF aircraft. A back-up logbook is located in 809 MXSS/MXDEC and will include the minimum information listed above.

14.69.3.1.4.2. (Added) Receive results of all oil samples including Red Caps analyzed by 809 MXSS/MXDEC and ensure lab requests for additional samples, trouble-shooting, engine removal, grounding of aircraft, etc., are complied with.

14.69.3.1.4.3. (Added) Contact the responsible section for the particular engine in question, annotate its location within 309 AMXG/MOC board located in Building 225, and make the proper logbook entry.

14.69.3.1.5. (Added) 571 AMXS/MXDPABA or 573 AMXS/MXDPADC, Building 233, and Engine Shop first-line supervisors will assign a qualified person to:

14.69.3.1.5.1. (Added) Draw routine oil samples from F-16 and A-10 aircraft after each flight and after test cell engine run and required maintenance runs.

14.69.3.1.5.2. (Added) 571 AMXS/MXDPABA or 573 AMXS/MXDPADC, Building 233, and Engine Shop first-line supervisors will assign a person to deliver oil samples to 809 MXSS/MXDEC, Building 100, with the DD Form 2026. For new or exchange engines, take along DD Form 2027 with the oil sample.

14.69.3.1.5.3. (Added) 571 AMXS/MXDPABA or 573 AMXS/MXDPADC, Building 233, and Engine Shop first-line supervisors will assign a qualified person to draw oil samples on test cell engine runs, after engine green runs, FCF, prior to delivery engine runs, and whenever requested by 809 MXSS/MXDEC.

14.69.3.1.5.4. (Added) Coordinate with 809 MXSS/MXDEA, Building 100, to ensure prompt return of analysis prior to aircraft delivery or deployment. (Refer to delivery checklist.).

NOTE 1: (Added) Do not send oil samples to 809 MXSS/MXDEC without the applicable DD Form 2026 or 2027.

NOTE 2: (Added) Red Caps (requested by 809 MXSS/MXDEC) will be handled on an individual basis any time of the day because of their urgency. Red Cap actions will be coordinated and documented through 573 AMXS/MXDPADC or 571 AMXS/MXDPABA, and a scheduler will document any direct request for oil samples.

NOTE 3: (Added) This also applies to any matrixed organizations.

14.70. (Added) NON-DESTRUCTIVE INSPECTION (NDI). This section establishes the minimum requirements for the qualification and certification of NDI personnel in the 309 MXW. This chapter meets/exceeds the requirements of National Aerospace Standard (NAS) 410 Rev. 3, *NAS Certification and Qualification of Nondestructive Test Personnel*, and applies to personnel using NDI methods to accept materials, products, subsystems, components or systems in the 309 MXW. It also applies to individuals responsible for the technical adequacy of NDI procedures and those providing technical training for NDI personnel. This chapter also supports AFI 21-105, *Air and Space Equipment Structural Maintenance*, TO 33B-1-1 *Nondestructive Testing* and TO 33B-1-2.

14.70.1. (Added) NDI Methods.

14.70.1.1. (Added) This publication relates to the following methods of NDI:

14.70.1.1.1. (Added) Liquid Penetrant, (PT).

14.70.1.1.2. (Added) Magnetic Particle, (MT).

14.70.1.1. 3. (Added) Eddy Current, (ET).

14.70.1. 1.4. (Added) Ultrasonic, (UT).

14.70.1. 1.5. (Added) Radiography, (RT).

14.70.1. 1.6. (Added) Shearography, (ST).

14.70.1. 1.7. (Added) Thermography, (IRT).

14.70.1.2. (Added) Other Techniques. Other types of NDI performed at 309 MXW are considered techniques within the methods listed above. Personnel performing computed tomography, computed radiography and real-time radiography will be certified in RT per this publication. Personnel utilizing specialized equipment to perform C-scan ultrasonic's will be certified in UT per this publication. It will be the responsibility of the supervisor to ensure that personnel have been trained and are proficient in the use of special equipment IAW the PAC program. Personnel performing visual or enhanced visual inspections will not require classroom training. They shall be trained on specific visual inspections utilizing OJT and proficiency documented IAW the PAC program in AFI 21-101 AFMC Sup 1 chapter 14.70. and local supplements. 309 MXW NDI techniques within NDI methods:

14.70.1.2.1. (Added) RT- Film radiography, computed tomography, computed radiography, and real time radiography.

14.70.1.2.2. (Added) UT- A-Scan, C-Scan.

14.70.1.2.3. (Added) PT- Type I fluorescent (portable and stationary).

14.70.1.2.4. (Added) MT- fluorescent wet (portable and stationary).

14.70.1.2.5. (Added) ET- surface, bolt hole automated, automated wheel scanner, conductivity.

14.70.1.2.6. (Added) IRT- thermography (indirect thermal).

14.70.1.2.7. (Added) ST- shearography (vacuum stressing, thermal stressing.)

14.70.1.3. (Added) New Methods. New workloads may require new methods of NDI to be performed at 309 MXW. New methods may be considered techniques within an existing method as stated above, or as standalone methods. The OO-ALC NDI Program Manager will determine the requirements for personnel training, experience, and examinations for any new NDI methods. Initial certification requirements for individuals performing new methods will be determined by the OO-ALC NDI Program Manager.(See paragraph 4.1.).

14.70.1.4. (Added) Technique Forms/Process Orders.

14.70.1.5. (Added) Levels of Qualification. The levels of qualification established by this instruction are:

14.70.1.5.1. (Added) Trainee.

14.70.1.5.2. (Added) Level I.

14.70.1.5.3. (Added) Level II.

14.70.1.5.4. (Added) Level III.

14.70.1.5.5. (Added) Instructor.

14.70.1.5.6. (Added) Auditor.

14.70.2. (Added) Levels of Certification. The levels requiring certification IAW this instruction are:

14.70.2.1. (Added) Level I.

14.70.2.2. (Added) Level II.

14.70.2.3. (Added) Level III.

14.70.3. (Added) Definitions. Refer to Attachment 1.

14.70.4. (Added) General Requirements.

14.70.4.1. (Added) Cognizant NDI Organization: The OO-ALC NDI Program Management Office (809 MXSS/CLA) shall be the cognizant NDI organization at the 309 MXSG. The NDI Program Management Office (809 MXSS/CLA) shall be responsible to maintain this instruction and shall be responsible for the training, certification, and qualification of personnel. 809 MXSS/CLA Level III personnel shall develop or approve new NDI procedures, provide general training, provide training on specific procedures, and administer the NDI certification program. The OO-ALC NDI Program Manager (assigned to the 809 MXSS/CLA), as defined in AFI 21-105, paragraphs 3.3.3.1., shall be an OO-ALC NDI Level III individual appointed in writing by the 809 MXSS/CL Squadron Director. 809 MXSS/CLA Level III personnel shall be designated SSQ officials as required in AFI 21-101 AFMC Sup 1, Chapter 14.55.

14.70.5. (Added) Detailed Certification Procedure.

14.70.5.1. (Added) Levels Of Qualification.

14.70.5.1.1. (Added) Trainee: A trainee is an individual who is participating in training for an NDI method and is not certified. Trainees shall obtain work experience only under the direct supervision of a Level II, Level III, or instructor in the same method. Trainees shall not independently conduct tests, make accept or reject decisions, or perform any other NDI functions.

14.70.5.1.2. (Added) Level I: Level I is the first certifiable qualification level. The Level I individual shall have the skills and knowledge to perform specific tasks and specific calibrations. A Level I individual may perform actual inspections for acceptance or rejection of production parts only under the direction of a certified Level II or III individual or be task certified for a specific task. The Level I individual shall be knowledgeable of any necessary preparation of parts before or after inspection. The individual shall be able to follow procedures in the techniques for which certified.

14.70.5.1.3. (Added) Level II: Level II individuals shall have the skills and knowledge to set up and calibrate equipment, conduct tests, and to interpret, evaluate, and document results IAW procedures approved by 809 MXSS/CLA NDI Level III personnel. The individual shall be thoroughly familiar with the scope and limitations of the method in which he is certified and

shall be capable of directing the work of trainees and Level I personnel, along with conducting OJT for lesser trained inspectors. The individual shall be able to organize and document NDI results. The individual shall be familiar with standards, technical orders, TCTOs etc., that pertain to the method of inspection and product being evaluated. NDI Level II personnel shall write procedures when required, which must be approved by 809 MXSS/CLA NDI Level III personnel prior to use.

14.70.5.1.4. (Added) Level III: Level III individuals shall have the skills and knowledge to interpret codes, standards, and other contractual documents that control the methods and products utilized at 309 MXW. Level III personnel shall select the method and technique for a specific inspection, and prepare or verify the adequacy of procedures. Only the 809 MXSS/CLA individuals certified to NDI Level III shall have the authority to approve procedures for technical adequacy in the method to which they are certified.

14.70.5.1.4.1. (Added) The individual shall have a general knowledge of all other NDI methods utilized at 309 MXW. The individual shall be capable of directing the training and examination of personnel in the method certified. The individual must pass an appropriate Level II practical examination to conduct NDI for the acceptance of parts.

14.70.5.1.5. (Added) Instructor: Instructors shall have the skills and knowledge to plan, organize, and present classroom, laboratory, or on-the-job training programs of instruction, IAW approved course outlines. 809 MXSS/CLA shall be responsible for providing instructors and performing classroom training. See paragraph 5.5. for qualification requirements.

14.70.5.1.6. (Added) Auditor: Auditors shall have the education, training, skills, and knowledge to understand the processes and procedures utilized in the application of NDI. The individual shall be familiar with the applicable codes, standards, and other contractual documents that control the method. See paragraph 5.6. for qualification requirements.

14.70.5.2. (Added) Training: Candidates for certification as Level I or Level II shall complete sufficient organized classroom training to become proficient with the principles and practices of the applicable test methods and techniques. Formal training requirements for Level I and Level II personnel may be accomplished by structured/traditional OJT as long as sufficient time has been spent on classroom training, and the OJT is documented. This applies to all NDI methods. This will be at the discretion of the OO-ALC NDI Program Manager or the 809 MXSS/CLA Level III responsible for meeting these requirements. The training will be conducted IAW a detailed course outline approved by the OO-ALC NDI Manager, IAW NAS 410 Rev. 3 and AFI 21-101, AFMC Sup 1, Chapter 14.70. Classroom training is provided by the OO-ALC NDI Program Management Office (809 MXSS/CLA). Pre-requisite training for all methods is “Introduction to Metals Course”. This is required once, prior to any NDI method certifications.

14.70.5.2.1. (Added) Minimum Required Classroom Training Hours: Training will encompass Level I and Level II combined for all candidates seeking certification. The minimum training hours for this type of training is given in **Table 1** for the specified NDI methods. There are no additional training requirements to transition from Level II to Level III nor can an individual have sufficient training to allow certification to Level III without prior certification as a Level II.

TABLE 1. (Added) Minimum Formal Training Hours, Level I and II.

METHOD	Level 1	Level 2 (with Level 1 experience)	Level 2 Direct access (without Level 1 experience)
PENETRANT	16	16	
MAGNETIC PARTICLE	16	16	32
THERMOGRAPHY	32	40	80
EDDY CURRENT	40	40	80
ULTRASONICS	40	40	80
RADIOGRAPHY	40	40	80
SHEAROGRAPHY	40	40	80

14.70.5.2.2. (Added) Previous/Equivalent Training: personnel who have received previous training or have been trained IAW other NDI qualification/certification programs must have the training documented. The previous training must be approved by the OO-ALC NDI Manager. For personnel credited with training or those not certified within 6 months of their training, refresher training must be provided. The depth of coverage shall be determined by the OO-ALC NDI Manager.

14.70.5.3. (Added) Experience: Candidates for certification at Level I, II, or III shall have sufficient practical experience to assure that they are capable of performing the duties of the level for which certification is sought. The minimum requirements for Level I and II are given in Table 2., and Level III is given in Table 3. Experience/OJT time shall be documented daily specifying equipment used, components tested, and time accumulated per method. OJT will be under the direction of the direct supervisor and the Wage Leader Trainer. Specialized equipment or technique training (see paragraph 1.1.) shall also be the responsibility of the direct Supervisor and documented in the employee's PAC record.

Table 2. (Added) Minimum Experience Requirements, Levels I and II

METHOD	Experience time in hours*		
	Level 1 (Trainee experience)	Level 2 (Level 1 experience)	Level 2 Direct Access (No Level 1 Cert)
PENETRANT	130	270	400
MAGNETIC PARTICLE	130	400	530
THERMOGRAPHY	200	400	800
EDDY CURRENT	400	1200	1600
ULTRASONICS	400	1200	1600
RADIOGRAPHY	400	1200	1600
SHEAROGRAPHY	400	1200	1600

* Experience in multiple methods may be accumulated simultaneously. Experience in method must be at least half this time when remaining time is in other NDT methods and approved by the OO-ALC NDI Manager. The OJT hours accrued for each method will not exceed 7 hours per day for composites and aircraft NDI personnel, and 8 hours per day for landing gear MT PT personnel.

Table 3. (Added) Minimum Experience Requirements for Level III

College or University	Level 2 or Equivalent Experience
None	4 years
Two years of engineering or science study at an accredited technical school, college or university	2 years
Graduate or successful completion of at least 3 years accredited science or engineering college or university program	1 year

14.70.5.3.1. (Added) Previous/Equivalent Experience: Previous or equivalent experience IAW any other NDI qualification/certification programs must be documented to be accepted. The equivalency of the previous experience will be determined by the OO-ALC NDI Manager.

14.70.5.4. (Added) Examinations: The examinations to verify the visual acuity and technical qualifications of candidate personnel shall consist of a vision examination, a general examination, a specific examination, and a practical examination. Test questions will be made available only during administration of examinations. Actual test questions given during certification examinations for the most current certification of each method will be kept in each individual's records. The OO-ALC NDI Manager shall approve test questions. Test questions will be kept in a locked container, or electronically. These questions will only be accessible to 809 MXSS/CLA NDI Level III personnel.

14.70.5.4.1. (Added) Visual Acuity: The visual acuity examination shall assure that the applicant's near vision and color perception meet the following requirements. The testing facility must be approved by the 309 MXW NDI Manager. The visual acuity test shall be administered annually by the Civilian Dispensary and recorded on AFMC Form 74 *Nondestructive Inspection Personnel Qualification and Certification Record*. The Civilian Dispensary is authorized by the 309 MXW NDI Manager to administer the annual vision tests. The Civilian Dispensary personnel are medically qualified to administer the annual eye exams.

14.70.5.4.1.1. (Added) Near Vision: Jaeger #1 test chart at not less than 12 inches, or equivalent as determined by medical personnel, with one eye either natural or corrected.

14.70.5.4.1.2. (Added) Color Perception: Distinguish and differentiate between the colors used in the method for which certification is sought, shall be administered prior to certification or re-certification.

14.70.5.4.2. (Added) General: The general examination for all levels shall be a closed book examination consisting of questions that cover the cross section of the applicable method at the appropriate level. A minimum of 40 questions shall be used for the general examination at each level. For Level III the general examination questions will address the general knowledge of

other methods as well as the method for which certification is sought. Possession of a current ASNT NDT Level III or equivalent certificate may be satisfactory evidence that the general examination is satisfied. These equivalent NDI Level III certificates may be from a previous employer. Other outside source Level III examinations may be used provided the source is approved by the 309 MXW NDI Manager. Outside Agency exams will be maintained in the applicable NDI Level III certification record for audit review.

14.70.5.4.3. (Added) Specific: The specific examination for all levels shall be a closed book examination, except reference material, and shall cover the specifications, codes, equipment, operating procedures, and test techniques the candidates may use in the performance of their duties. A minimum of 30 questions shall be used for the specific examination at each level.

14.70.5.4.3.1. (Added) All written tests will be stored in the ETMS computer based testing system or maintained electronically in a secure area until needed. This database will be made available to an auditor if required. No paper copies of tests will be stored anywhere except in the training records. The tests stored in the training records will have a score on them along with the individuals' name, and date that the test was taken. These training records will be kept in a locked container.

14.70.5.4.4. (Added) Practical: The practical examination shall consist of a demonstration of proficiency in performing tasks that are typical of those to be accomplished in the performance of the candidate's duties. Test samples used in the examination may be actual hardware, if the candidate is required to demonstrate proficiency in the application of the process as well as interpretation of results, or may be images, such as radiographs, if the candidate is only required to interpret the results and not perform the process of generating the image. SSQ checklists shall be used by SSQ officials during NDI method practical examinations. Additional checklists may be used during practical exams to assist in the administration and grading of the examination. Additional checklists will be approved by the OO-ALC NDI Manager. Penetrant, Magnetic Particle, and Radiographic certification and recertification practical exams will require a written procedure to be completed for each test specimen being evaluated. One test specimen per technique under a method and a minimum of two specimens will be evaluated for each NDI method during practical exams. These procedures will become part of the certification documentation and maintained in each individual training record. As practical test specimens are crack mapped and cataloged they will be used accordingly. Cracked specimens used for practical exams will be identified on the individual's SSQ form for audit purposes. X-ray film from practical exams will be maintained in the NDI Program Management Office. All test specimens will be kept secured until needed.

14.70.5.4.4.1. (Added) Level I: The candidate shall demonstrate proficiency by using the appropriate method to examine at least one test sample for each technique to be used and document the results. The test samples shall be representative of the products to be encountered by the candidate in the performance of their duties. The checklist shall address proficiency in the use of equipment and materials, adherence to procedural details and documentation of results.

14.70.5.4.4.2. (Added) Level II: The candidate shall demonstrate proficiency by using the appropriate method to examine at least two test samples for each method. The test samples shall be representative of the product to be encountered by the candidate in the performance of their duties. The candidate shall interpret, evaluate, and document the results of the examination of the test samples. The checklist shall include proficiency in the use of equipment and materials,

adherence to procedural details, and the accuracy and completeness of interpretation and evaluations of indications.

14.70.5.4.4.3. (Added) Level III: The candidate shall demonstrate proficiency by preparing an NDI procedure appropriate to TO requirements.

14.70.5.4.4.4. (Added) Level III: Production Acceptance. When the candidate's duties will include inspection or evaluation of products, the proficiency in performance of such tasks shall be demonstrated and documented using the applicable SSQ form. Checklists shall address the practical and technical adequacy of the procedures prepared by the candidate, and when applicable, the adequacy of interpretation and evaluation of indications. In the event that the candidate has already developed satisfactory procedures, then it is not necessary to develop another one for the practical examination. The results of the practical examination shall be documented.

14.70.5.4.5. (Added) Administration: An 809 MXSS/CLA NDI Level III, knowledgeable and familiar with the specifications, standards, codes, techniques, and products inspected at OO-ALC, and certified Level III in the method for which examinations are given, shall be responsible for the administration of all qualification examinations. The administration and grading of those examinations using multiple choice or true/false type questions can be delegated by the Level III. Responses to essay questions must be evaluated by the responsible Level III to verify the certification candidate's adequate understanding of the subject matter. Only the appropriate 809 MXSS/CLA NDI Level III can administer practical examinations in the methods for which they are certified. All 809 MXSS/CLA Level III certifications must be approved by the OO-ALC NDI Program Manager. The OO-ALC NDI Manager shall approve any outside agency used to administer all tests. In no case can an examination be administered by one's self or by a subordinate.

14.70.5.4.6. (Added) Grading: The candidate for certification must achieve a minimum grade of 70% on the general and specific qualification examinations. The candidate must detect all discontinuities or conditions specified by the Level III during the practical examination and achieve a minimum score of 70%. The candidate must have an average score on all three required tests (general, practical, and specific) of no less than 80% in order to be eligible for certification. All examination scores shall be of equal weight in determining the average score. Scores for third party examinations where grading is pass/fail, the value of pass used for the average score shall be 80%.

14.70.5.4.7. (Added) Re-Examination: Candidates failing any examination, (general, specific, or practical) shall receive additional training before attempting re-examination of the failed exam. The additional training shall be documented and shall address those areas found deficient in the candidate's skills or knowledge. The supervisor shall be responsible for this training and shall be documented in the individual's PAC folder. The re-examination shall not utilize the same written tests or practical specimens that were used in the initial failed examination. The re-examination written test must contain a minimum of 25% new questions.

14.70.5.5. (Added) Approval of Instructors: Instructors shall be approved by the OO-ALC NDI Manager and be one of the following:

14.70.5.5.1. (Added) Be certified to level III in the method for which they will be designated instructors.

14.70.5.5.2. (Added) Possess the equivalent of a bachelor of science degree in engineering, physical science or technology and have adequate knowledge in the method for which they will be designated instructors.

14.70.5.5.3. (Added) Possess an associate's degree in physical science or technology and have a minimum of 2 years experience, or equivalent, as a Level II in the method for which they will be designated instructors.

14.70.5.5.4. (Added) Posses a minimum of 4 years experience as a Level II, or equivalent, in the method for which they will be designated instructors.

14.70.5.6. (Added) Qualification And Approval Of Auditors. The OO-ALC NDI Manager shall approve personnel performing audits, surveys, or assessments. Audit personnel shall meet the requirements in NAS 410 Rev. 3 paragraph **5.1.7.**

14.70.5.7. (Added) Certification: Personnel, who have demonstrated that they meet the requirements herein, shall be certified by the SSQ Qualification official in 809 MXSS/CLA IAW this publication. Certification is not required for personnel who are trainees or those who are designated as instructors or auditors.

14.70.5.7.1. (Added) Records: All training records will be kept secured until needed. The following records shall be kept by the appropriate organization for as long as an individual's certification is in effect.

14.70.5.7.1.1. (Added) Name of the individual certified. (809 MXSS/MXRL, Certification Document).

14.70.5.7.1.2. (Added) Level, method, and techniques for which individual is certified. (809 MXSS/MXRL, Certification Document).

14.70.5.7.1.3. (Added) Results of all qualification examinations, including latest written test and test scores, that the individual has taken. Practical exam results will be recorded on the SSQ Guide Checklist. (809 MXSS/MXRL).

14.70.5.7.1.4. (Added) Date and expiration of current certification(s). (809 MXSS/MXRL, Certification Document).

14.70.5.7.1.5. (Added) History of all previous NDI certifications. (809 MXSS/MXRL PAC Record).

14.70.5.7.1.6. (Added) Training history which identifies source, type of training and dates of training, course hours and grades (if given after training), and instructor's name. (809 MXSS/MXRILN PAC record and 809 MXSS/MXRL AF Form 1151, Training Attendance and Rating).

14.70.5.7.1.7. (Added) Experience history, both with current and previous employers sufficient to justify satisfaction of experience requirements for certification. (809 MXSS/MXRL, PAC record).

14.70.5.7.1.8. (Added) Results of physical examinations. (809 MXSS/MXRL AFMC Form 74).

14.70.5.7.1.9. (Added) Extent and documentation of formal education. (809 MXSS/MXRL Personnel Folder/PAC Folder).

14.70.5.7.2. (Added) Loss Of Certification. Certification may expire, be suspended or be revoked. Certification shall expire when employment is terminated or when the certification interval has lapsed with no recertification issued. Certification shall not be extended to cover TDY or leave time. Certification shall be suspended when the physical examination is overdue, the individual does not perform in the method certified for at least 3 consecutive months, or the individual's performance is found to be deficient in any manner. Certification shall be revoked when the individual does not perform in the method certified for at least 6 consecutive months or the individuals' conduct is found to be unethical or incompetent.

14.70.5.7.3. (Added) Reinstatement Of Certification. Certifications, which have been suspended, may be reinstated when the cause for the suspension has been corrected and the correction verified by the OO-ALC NDI Manager. Certifications that have expired or been revoked may not be reinstated except by recertification.

14.70.5.7.4. (Added) Recertification.

14.70.5.7.4.1. (Added) Level I And II Recertification. Level I and Level II personnel shall be recertified every 3 years. The year that recertification is due visual acuity, general, practical, and specific examinations equivalent to those required for initial certification shall be administered. On years where only the eye test is due, the eye test will be sufficient for SSQ requalification, which is due annually.

14.70.5.7.4.2. (Added) Level III Recertification. Level III personnel shall be recertified every 5 years. Recertification including the practical may be accomplished by the Level III Credit System for Re-certification identified in Annex A of NAS 410 Rev. 3. If equipment operation or accepting production hardware is required as part of their duties, a practical exam equivalent to initial certification shall be administered. On years where recertification is not due only the vision examination will be required. On years where only the vision test is due, the vision test will be sufficient for SSQ requalification, which is due annually.

14.70.5.8. (Added) Contractors Performing NDI at OO-ALC.

14.70.5.9. (Added) Authorization Of Contractors. In the event a contractor is used to augment 309 MXW capability to perform NDI the contractor shall ONLY be authorized by the OO-ALC NDI Manager. The contractor must have a certification program IAW NAS 410 Rev. 3. The contractor shall provide the OO-ALC NDI Program Manager a copy of the inspectors training records along with certification documentation for each individual performing inspections and will be required to attend any additional training as deemed necessary by the OO-ALC NDI Program Manager.

14.70.6. (Added) Contractor Stamping Paperwork. Any approved contractor performing inspections at OO-ALC shall provide the OO-ALC NDI Manager with stamp number information for each individual authorized to inspect actual hardware. The individual performing the inspection shall use the stamp issued by their employer to stamp paperwork. The contractor shall be aware of the requirements of AMFCI 21-110 as it applies to accepting work accomplished.

14.70.7. (Added) The detailed course outlines listed below are approved by the OO-ALC NDI Program Manager and will be maintained and controlled by the 809 MXSS/CLA.: See following Attachments:

14.70.7.1. (Added) Attachment 14.70.A1, Course: (PT) Fluorescent Penetrant Inspection Stationary and Portable Level 2 (CTEMAS0000100SU)

14.70.7.2. (Added) Attachment 14.70.A2, Course: (MT) Magnetic Particle Inspection Stationary and Portable Level 2 (CTEMAS0000200SU)

14.70.7.3. (Added) Attachment 14.70.A3, Course: (ET) Eddy Current Inspection Level 2 (CTEMAS0000103SU)

14.70.7.4. (Added) Attachment 14.70.A4, Course: (UT) Ultrasonic Inspection Level 2 (CTEMAS0000301SU)

14.70.7.5. (Added) Attachment 14.70.A5, Course: (RT) Radiography Inspection Level 2 (CTEMAS0000401SU)

14.71. (Added) 309 AMARG Job Control Operations

14.71.1. (Added) General.

14.71.1.1. (Added) Supervisors must call 309 AMARG Control at 228-8777 when any incident occurs, whether a minor injury or a serious injury requiring immediate medical attention, a fire, a gas leak, a vehicle accident, property damage or an aircraft incident such as FOD. Supervisors are required to fill out the supervisor checklist for industrial/vehicle accidents, personnel injury or ground mishap, within 24 hours of initial notification. The supervisor's checklist is in addition to any emergency action check sheet documentation requirements. See Table A2.1. Emergency Action Check-sheet Index, Table A2.2, **309 AMARG Important Phone Numbers**, and Table A3.1. Sample Annual Check-sheet Review.

14.71.1.2. (Added) Supervisors will notify 309 AMARG Control by e-mail no later than 2 hours before end-of-normal-duty day of the time, location and number of personnel working overtime.

14.71.1.3. (Added) The crew working overtime will notify 309 AMARG Control before they leave for the day.

14.71.1.4. (Added) During normal duty hours 309 AMARG Control will use the appropriate check sheet.

14.71.2. (Added) 309 AMARG Employee Responsibilities.

14.71.2.1. (Added) Employees are required to immediately report any incident that occurs, whether accident, fire, smoke, hazardous material spill or exposure, injury, FOD, damage to an aircraft, etc., to a supervisor who calls 309 AMARG Control.

14.71.2.2. (Added) If an injury is life threatening, call 911 and then notify 309 AMARG Control immediately.

14.71.2.3. (Added) If a fire is an immediate danger, evacuate the building and, when safe, call 309 AMARG Control immediately.

14.71.2.4. (Added) Immediately notify 309 AMARG Control in the event maintenance of a system with hydrazine or of a hydrazine spill.

14.71.2.5. (Added) Flight line expeditors will maintain a copy of all Emergency Action Check sheets in their vehicles.

14.71.3. (Added) 309 AMARG Control will:

14.71.3.1. (Added) Be manned during all hours of maintenance operations.

14.71.3.2. (Added) Use Emergency Action Check sheets to ensure the appropriate actions are taken depending on the circumstances, mishap or incident, during real world or exercise conditions, unusual occurrences or emergency situations.

14.71.3.2.1. (Added) Use 309 AMARG Control Room Procedures and this instruction.

14.71.3.3. (Added) Will update the Emergency Action Check sheets, Supervisor's Checklist, and 309 AMARG Control Room Procedures, when changes are made to offices, functions, responsibilities, phone numbers and support agreements that affect maintenance operations, etc.

14.71.3.4. (Added) Use the 309 AMARG group e-mail address to e-mail and the radio to advise of adverse weather conditions information that is provided by 355th Operations Support

Squadron/Weather Flight (355 OSS/OSW) to 309 AMARG IAW Base Instruction (BI) 15-114, *Base Weather Support*.

14.71.3.5. (Added) Relay messages from the DMAFB Base Operations to the appropriate personnel regarding aircraft arriving for or departing from 309 AMARG.

14.71.3.6. (Added) Maintain the Engine Run Proficiency Log as described in Chapter 14, Section 14.54.

14.71.3.6.1. (Added) Ensure all information is entered immediately whether the engine run is on the aircraft or on the test cell: Engine operator's name, aircraft MDS and engine, aircraft/engine serial number being run, date of engine operation and location of the operation.

14.71.3.6.2. (Added) Advise respective work center supervisors when operators are not identified as currently certified.

14.71.3.6.3. (Added) When an aircraft or engine is suspected of FOD damage, 309 AMARG Control will notify 309 AMARG Quality Assurance of the requested impoundment IAW Chapter 9B, *Impoundment Procedures*.

14.71.3.7. (Added) IAW AFMCI 11-201, 309 AMARG Supplement 1 *Supervision of Flight Operations*, if an incoming aircraft cannot land at Davis-Monthan AFB and must be diverted to an alternate recovery base, relay all messages to Flight Test.

14.71.3.7.1. (Added) Upon notification of an aircraft arrival at a divert base, obtain the actual time of arrival, maintenance status and expected return to 309 AMARG.

14.71.3.7.2. (Added) Notify Flight Test.

14.71.3.8. (Added) Notify the FOD prevention officer in Flight Test, 309 AMARG Quality Assurance and Safety Office and when FOD is discovered or suspected.

14.71.3.9. (Added) Schedule the motorized sweeper IAW Chapter 14, section 14.41. to sweep the flight line rows, parking pads, trim pad and taxiways each week or as requested by maintenance supervision.

14.71.3.10. (Added) When an aircraft departs 309 AMARG:

14.71.3.10.1. (Added) Prepare the flyaway status documents.

14.71.3.10.2. (Added) Log the departure when the aircraft departs.

14.71.3.10.3. (Added) Send departure documents to the 309 AMARG AVDO upon departure of an aircraft.

14.71.3.11. (Added) When notified that a tool has been lost on an aircraft, then IAW Chapter 10B:

14.71.3.11.1. (Added) Notify 309 AMARG/QA personnel.

14.71.3.11.2. (Added) Notify the planning and scheduling functions of the affected process.

14.71.3.11.3. (Added) Inform the appropriate agencies that no further work will be performed on the affected aircraft except for ground safety requirements.

14.71.3.12. (Added) Keep and secure the keys to any special configuration type aircraft. Allow management, crew chiefs, 309 AMARG/QA and 309 AMARG Safety to sign out the aircraft key on a hand receipt.

14.71.3.13. (Added) Will notify the following when an aircraft arrives at 309 AMARG:

14.71.3.13.1. (Added) 309 AMARG AVDO if by air or land.

14.71.3.13.2. (Added) Storage flight scheduler if by air or land.

14.71.3.13.3. (Added) Aircraft Receiving Section if by air or land.

14.71.3.13.4. (Added) Egress Section.

14.71.3.13.5. (Added) Flight line Support Branch.

14.71.6.3.13.6. (Added), Motor Pool if by land.

14.71.3.14. (Added) Will control, coordinate and prioritize all aircraft moves and input all aircraft location changes except for those made by the Towing Section. The crew towing an aircraft to another location during storage or regeneration processing will notify 309 AMARG Control of the new location of the aircraft.

14.71.3.15. (Added) Control and issue the magnetic numbered cones to allow access to areas off the paved streets and parking lots. Brief all personnel signing out cones:

14.71.3.15.1. (Added) Brief each person what areas they may access with the cone when signing out cones.

14.71.3.15.2. (Added) Ensure lost or damaged cones are reported to 309 AMARG Security Office (CCS).

14.71.3.15.3. (Added) At the end of each day, verify temporarily issued cones have been returned.

14.71.3.16. (Added) Maintain the 309 AMARG escort checklists for 1 year that are prepared by the 309 AMARG host and brief the escort. Provide a copy of instructions to the escort.

14.71.3.17. (Added) Ensure 309 AMARG activities are transmitting on the assigned nets.

14.71.3.17.1. (Added) Broadcast messages to cease all non-essential and non-emergency transmission on Net 3. Direct transfer to the alternate net during emergency operations that require the use of a land mobile radio (LMR).

14.71.3.18. (Added) Manages and administers the communications functions during emergency or alert conditions.

14.71.3.18.1. (Added) Notify employees of the conditions.

14.71.3.18.2. (Added) Remind employees that failure to heed instructions or heed radio silence will result in referral for disciplinary action.

14.71.3.18.3. (Added) Ensure personal conversations are not permitted on the LMR.

14.71.3.18.4. (Added) Ensure profane or obscene language is not transmitted.

14.71.3.18.5. (Added) Remind radio operators they are subject to prosecution for airway abuse.

14.71.3.18.6. (Added) If 309 AMARG Control becomes non-functional, continue radio/control operations from the pre-determined alternate control location.

14.71.3.19. (Added) Maintain a log to document aircraft damage incidents.

14.71.3.19.1. (Added) Record all reported aircraft damage calls.

14.71.3.19.2. (Added) Notify 309 AMARG Safety.

14.71.3.19.3. (Added) Notify 309 AMARG Safety.

14.71.3.19.4. (Added) Update the damage report log and status as notified by 309 AMARG Safety, 309 AMARG Security, 576 AMRS Planner and Scheduler.

14.71.3.20. (Added) Develop and maintain a hydrazine spill response check sheet.

14.71.3.20.1. (Added) Initiate the hydrazine spill response check sheet (#15) if a hydrazine leak or spill is detected when notified by the maintenance crew.

14.71.3.21. (Added) Notify 355th Security Forces Squadron (SFS) at extension 228-4444 when it is reported that an unauthorized person is in 309 AMARG. Tell the person calling to just observe, make notes of the description and actions and assist the security forces personnel upon arrival.

14.71.3.22. (Added) Record the results of any emergency action calls made during emergency conditions.

14.71.3.22.1. (Added) Coordinate calls to the security forces about unauthorized personnel in 309 AMARG.

14.71.3.22.2. (Added) In the event of a fire, remind the caller of the requirement to move upwind at least 500 feet from the building. Accomplish emergency action check sheet #6.

14.71.3.22.3. (Added) Call the Fire Protection Flight, the 309 AMARG Environmental Manager (QA-ENV), and 309 AMARG Safety.

14.71.3.22.4. (Added) Call each building within the radius of evacuation area and give notice to evacuate and in which direction. Notify personnel which direction/location is off limits.

14.71.3.23. (Added) Make note when radioed or called by the commodities squadron, A-10 wings flight senior radiographer of the x-ray operations are commencing.

14.71.3.23.1. (Added) Maintain radio communications with radiographic operations personnel until completed.

14.71.3.23.2. (Added) Notify the chiefs of 309 AMARG Security when told that anyone has penetrated the barrier during operations.

14.71.3.23.3. (Added) Notify the base radiation safety office and 309 AMARG security when someone is exposed.

14.71.3.24. (Added) Will, when notified, that munitions or weapons are being transported:

14.71.3.24.1. (Added) Notify 355 SFS/SFOL of any shortage, the number of weapons being transported and arrival at the destination.

14.71.3.24.2. (Added) Ensure two authorized personnel surveillance the weapons when in transit.

14.71.3.24.3. (Added) In the event of a robbery, call 355 SFS/SFOL and 355 SFS/SPOL, Crime Stop, x4444.

14.71.3.25. (Added) Maintain a daily log of events: Aircraft movements and locations, weather reports affecting operations, newsworthy events, aircraft arrivals, departures, functional check flights, impoundments actions and events, lost/found tools, incidents/mishaps/accidents, production limiting factors, confined space entry, and etc.

14.71.3.26. (Added) Adhere to policies, procedures and existing directives to ensure the mission is not compromised.

14.71.3.27. (Added) Maintains security over the set of keys giving access to all 309 AMARG buildings:

14.71.3.27.1. (Added) Permits entry to a building in emergency situations during non-duty hours.

14.71.3.27.2. (Added) Allow 309 AMARG Maintenance, 309 AMARG Quality Assurance and 309 AMARG Security personnel into the TO Library to sign out a TO on an AF Form 614.

14.71.3.28. (Added) Use the *Confined Space Entry Permit Checklist* as defined in the master entry plan for 576 AMRS and 577 CMRS when notified by employees of these areas that they are entering and exiting a confined space. Forward the completed checklist to 309 AMARG Safety.

14.71.4. (Added) 309 AMARG Overland Arrivals. 309 AMARG Retail Supply, will notify 309 AMARG Control when an aircraft arrives by overland transport.

14.71.5. (Added) 309 AMARG Tow To Storage. The storage services scheduler will notify 309 AMARG Control as each process to bring the aircraft in to 309 AMARG for storage is completed and the aircraft is safe to tow to a hold or storage area.

14.71.6. (Added) AMARG. The AGE . Maintenance controller in the Industrial services flight will work with 309 AMARG Control to schedule AGE maintenance.

14.71.6.1. (Added) All powered and non-powered AGE movement MUST be called in to 309 AMARG Control, including the 150 pound aircraft fire extinguishers. The individual that moves the equipment is responsible for calling in the movement, including AGE drivers.

EXCEPTION: (Added) Spraylat rigs and towing tow bars. For any questions, call 309 AMARG Control.

14.71.7. (Added) 309 AMARG Weapons Movement. Employees will notify 309 AMARG Control prior to transporting munitions or weapons into or out of 309 AMARG.

14.71.8. (Added) 309 AMARG Call Sign Assignment. LMR manager will assign a call sign for each radio unit issued. Radio call signs are assigned to a specific division, office, branch or section.

14.71.8.1. (Added) Notify 309 AMARG Control in writing of the call signs assigned,

14.71.8.2. (Added) Provide the identity of the shop or person the radio and call sign are assigned to.

14.71.8.3. (Added) If temporary, provide the approximate length of time of the assignment.

14.71.8.4. (Added) Location of the work site.

14.71.8.5. (Added) When the assignment of a radio and call sign are terminated.

14.71.9. (Added) 309 AMARG Information Management Tools And Forms.

14.71.10. (Added) 309 AMXG Aircraft Maintenance Control And Status Center.

14.71.10.1. (Added) Operational Status: The Aircraft Maintenance Operations Control and Status Center (574 AMXS), hereinafter referred to as the “control center,” is responsible for being the point of contact for notification procedures and required actions pertaining to incidents, mishaps, real-world or exercise conditions, unusual occurrences, or emergency situations; to include adverse weather affecting 309 AMXG resources.

14.71.10.2. (Added) 309 AMXG Control Center Personnel:

14.71.10.2.1. (Added) Will maintain status displays which will portray aircraft location, all pertinent information regarding aircraft status, all current workload information, and be knowledgeable of hangar and ramp areas.

14.71.10.2.2. (Added) Will plan, control, coordinate, and prioritize all aircraft moves. When the need arises, coordinate with applicable 309 AMXG production squadrons.

14.71.10.2.3. (Added) Will plan, control, coordinate, and prioritize workload requirements such as fuel, oxygen, ground support equipment, and towing. When the need arises, coordinate with applicable 309 AMXG production squadrons.

14.71.10.2.4. (Added) Will dispatch, coordinate, and prioritize transportation requirements such as forklifts, cranes, tugs, and other vehicles, as needed.

14.71.10.2.5. (Added) Will be knowledgeable of procedures for real-world or exercise conditions and be able to react as required.

14.71.10.2.6. (Added) Will plan, control, coordinate, prioritize, develop, and maintain checklists to ensure emergency actions are accomplished. Disseminate information and make notifications to appropriate management officials and workforce personnel as required.

14.71.10.2.7. (Added) Will be knowledgeable of the proper operation of two-way radio systems to plan, control, coordinate, and prioritize all aspects of aircraft operation and maintenance, including proper radio discipline and uses of the net manager’s operating guide and applicable directives.

14.71.10.2.8. (Added) Will be able to interpret and analyze weather information received from the 75th Operations Support Squadron Weather Flight Commander (75 OSS/OSW) on the Automated Weather Distribution Systems terminal. React in the appropriate manner as directed by weather directives. Act as the focal point and controlling agency for the protection and preservation of 309 AMXG resources. Be knowledgeable of flying weather up to and including visibility and ceiling minimums for all Program Depot Maintenance (PDM) weapon systems.

14.71.10.2.9. (Added) Will prepare reports for 309 AMXG briefings, reflecting pertinent information on the status of each aircraft.

14.71.10.2.10. (Added) Will maintain a daily log to document noteworthy events. Control Center personnel will log as a minimum:

14.71.10.2.10.1. (Added) Weather watches or warnings in effect.

14.71.10.2.10.2. (Added) Safety mishap calls, 911 calls.

14.71.10.2.10.3. (Added) Details of aircraft arrivals, departures, or functional check flights that become known during the shift.

14.71.10.2.10.4. (Added) Any unusual occurrences or incidents that require notification of the 309 MXW or 309 AMXG.

14.71.10.2.11. (Added) Will receive results of all jet engine oil sample analyses by telephone from the Environmental Laboratory (309 MXSS/MXDEB). Control room technician will notify the preparation for flight supervisor or crew chief of the analysis results.

14.71.10.2.12. (Added) The 574 AMXS Control Center technician will be the point of contact for all trouble calls within 309 AMXG. Upon notification of a problem, the technician will record the problem in the trouble call logbook located in the control center, and notify the 75th Civil Engineering Squadron (75 CES/CEZC) trouble call desk of the nature of the problem. The 75 CES/CEZC receptionist will provide a control number that the technician will enter in the appropriate block of the trouble call logbook. The technician will enter the following in the trouble call logbook:

14.71.10.2.12.1. (Added) Date.

14.71.10.2.12.2. (Added) Time.

14.71.10.2.12.3. (Added) Initials of person receiving the trouble call.

14.71.10.2.12.4. (Added) Name and phone number of caller.

14.71.10.2.12.5. (Added) Nature of problem.

14.71.10.2.12.6. (Added) 75 CES/CEZC control number.

14.71.11. (Added) 309 AMXG Control Center supervisor will:

14.71.11.1. (Added) Oversee the overall management of the control center.

14.71.11.2. (Added) Enforce radio and telephone discipline.

14.71.11.3. (Added) Oversee all status and aircraft location displays and computer systems for timely and correct entries.

14.71.11.4. (Added) Monitor the control center logbook entries by performing spot checks.

14.71.11.5. (Added) Monitor hard copy publications such as plans, instructions, regulations, rosters, and schedules for timely filing of changes and updates by performing spot checks.

14.71.11.6. (Added) Ensure recall rosters are current (no more than 3 months old). Will maintain the key personnel emergency list office numbers and home telephone numbers are current.

14.71.12. (Added) 309 AMXG Facilities Engineering Division (309 AMXG/EN) personnel will:

14.71.12.1. (Added) Ensure the control center is informed of all limiting factors to production caused by facilities and ramp maintenance.

14.71.12.2. (Added) Assume point of contact duties for follow-up on trouble calls that have been initiated by control center personnel.

14.71.13. (Added) 309 AMXG Production personnel will:

14.71.13.1. (Added) Ensure the control center is informed as soon as possible of all pertinent information pertaining to mission accomplishment; i.e., ground support equipment incidents and accidents.

14.71.13.2. (Added) Notify the control center by either handheld radio or telephone when an aircraft is required to be towed to the next maintenance location and provide the aircraft tail number, present location, and destination to the tow vehicle driver.

14.71.13.3. (Added) Adhere to policies, procedures, and existing directives to ensure the mission is not compromised.

Table A2.1. (Added) Emergency Action Check sheet Index

	Check Sheet Subject
1.	In-Flight Emergency
2.	Ground Emergency/Hot Brakes
3.	Aircraft Mishap (On/Off Base)
4.	Diverted Aircraft
5.	Aircraft Damage/Bird Strike
6.	Fire
7.	Fuel Spill
8.	Dropped Object
9.	Lost Tool/Aircraft FOD
10.	Bomb Threat
11.	Ground Accident (Personnel Injury/Vehicle Accident)
12.	BSD Notification/Force Protection Alert
13.	Aircraft Stop Alert/Anti-Hijack
14.	Heat Stress Index
15.	Hydrazine (H-70)
16.	Emergency Evacuation Procedures
17.	Severe Weather Advisory Procedures
18.	Impoundment
19.	Aircraft Ground Abort

NOTE: All flight line expeditors are required to maintain a copy of these check sheets in their vehicle.

Table A2.2. (Added) 309 AMARG Important Phone Numbers.

309 AMARG Control	228-8777
309 AMARG Security	228-8284
DM Security Forces	228-3200
DM Command Post	228-7400
Fire Department	911 / 228-4757
DM Base Operations	228-5420
309 AMARG/CC	228-8146, Cell 404-3533
309 AMARG/CD	228-8158, Cell- 850-4124
309 AMARG/SE	228-8363
309 AMARG/MA	228-8775
309 AMARG/LG	228-8057
309 AMARG/FM	228-8096
309 AMARG/PA (for refer	228-8448
309 AMARG/XP	228-8970

Table A3.1. (Added) Sample Annual Check sheet Review.

	By	Date	Initial
All check sheets reviewed:			
All check sheets reviewed:			
All check sheets reviewed:			
All check sheets reviewed:			
All check sheets reviewed:			
All check sheets reviewed:			
All check sheets reviewed:			
All Check sheets reviewed:			

14.72. (Added) 309 CMXG Manufacturing Plan and Historical Data & Traceability Records for Composites.

14.72.1. (Added) To satisfy process specification and TO requirements for history and traceability on composite materials. History and traceability are required from the manufacture of materials to the installation of processed materials on an aircraft. This document also provides supplemental information to support HAFBMAN 63-501 *Quality Management System*.

14.72.1.1. (Added) Safety requirements addressed in the shop training package and associated repair TOs will be strictly adhered to. Health and safety codes are also identified on the WCD to provide safety guidance.

14.72.2. (Added) 309 CMXG Responsibilities of the Production Planning Element (575 AMXS/MABGT).

14.72.2.1. (Added) For each part planned a WCD, will be used as the historical data and traceability record (WCDs are: AFMC Form 959, ITS, IMPRESSA or PDMSS documents). The most current, up-to-date applicable drawings, Fort Worth Military Specifications (FMS) and Fort Worth Process Specifications (FPS), will be given to the 575 AMXS/MABG technician.

14.72.2.2. (Added) Coordinate with the Shop Service Center (575 AMXS/SSC) that required material is obtainable. If not obtainable, submit an AFMC Form 202, (IAW AFMCMAN 21-1,) to Advanced Composites SSC (575 AMXS) for recommendation.

14.72.2.3. (Added) Assign a unique serial number to each WCD, using current 5-digit Julian date with a dash number. Dash number will be used for sequence of parts manufactured for specific day (example: 97231-1, 97231-2, etc.).

14.72.2.4. (Added) Planner will assign a serial number to the test tab. Serial number will consist of the type of material used, such as graphite (G), boron (B), or fiberglass (F), etc. Use the first alpha of the material plus sequence number of tabs produced for that day. (Example: G-001 or F-001).

14.72.2.5. (Added) Planner will fill out self-explanatory AFMC Form 137 with testing, control number and JON.

14.72.2.6. (Added) Keep a computerized log of all dates, serial numbers, control numbers, part numbers and nouns for 1 year in an Excel database.

14.72.3. (Added) 309 AMXG Process and Procedures for 575 AMXS/MABG:

14.72.3.1. (Added) Certified technician will review the WCD, FPS, FMS, and drawings for required material and tooling.

14.72.3.1.1. (Added) Technicians will request freezer control material from the squadron MIC for issuance. Record data on the WCD in the appropriate space, and attach applicable material records to the WCD.

14.72.3.1.2. (Added) Allow thaw time according to FPS. Annotate the WCD with lay-up date and cure-by date in the appropriate space.

14.72.3.1.3. (Added) At the beginning of the lay-up process, verify clean room temperature and humidity by visually checking the computerized temperature and humidity monitoring system.

Record data on the WCD in the appropriate space, IAW TO 00-25-203, *Contamination Control of Aerospace Facilities*.

14.72.3.1.4. (Added) Cut and lay up composite material using template required for each ply IAW the WCD.

14.72.3.1.5. (Added) Make one test tab for each batch of material in the same oven/autoclave cure and post cure cycle IAW FPS.

14.72.3.1.6. (Added) Bag and prepare laminate for autoclave IAW FPS.

14.72.3.1.7. (Added) After cure, attach the autoclave computer-generated record to the WCD.

14.72.3.1.8. (Added) Allow laminate enough time to cool before handling. Remove from bond form and provide evaluation and inspection (E&I) with test tab.

14.72.3.1.9. (Added) E&I date & sign Routed Order. Route test tab to the Metallurgical Laboratory (809 MXSS/MADLM) for testing IAW FPS.

14.72.3.1.10. (Added) Hold laminate until test results are obtained. If test tab fails, E&I or the technician will submit and prepare AFMC Form 202 for disposition. The technician or E&I will initiate the AFMC Form 202 into the electronic 202 system. The planner will review/forward the AFMC Form 202 to the appropriate engineering section for review/disposition IAW AFMCM 21-1.

14.72.3.2. (Added) Technician will clean and inspect laminate IAW FPS.

14.72.3.2.1. (Added) Hand carry laminate, IAW the WCD, to the NDI Section (809 MXSS/MADPN).

14.72.3.2.2. (Added) Review the WCD for NDI completed operation. Check for acceptable or unacceptable results. If unacceptable, notify E&I.

14.72.3.3. (Added) If unacceptable, E&I or the technician will prepare AFMC Form 202 for disposition. E&I or the technician will forward the prepared AFMC Form 202 to the planner for review. The planner will review/forward the AFMC Form 202 to the appropriate engineering function for review/disposition IAW AFMCM 21-1.

14.72.3.3.1. (Added) If acceptable, E & I will complete a DD 1574, *Serviceable Condition Tag*, by filling in federal stock number, part number, noun, condition code, inspection activity, serial number, unit of issue, contract or purchase number, quantity, inspector's name, date, and remarks. Attach to laminate.

14.72.4. (Added) 309 AMXG verification performed by production supervisor:

14.72.4.1. (Added) Verify all operations are signed off. Production supervisor will determine action or actions necessary to correct deficiencies as required.

14.72.4.2. (Added) Production Planning Element, 575 AMXS/MABGT.

14.72.4.3. (Added) 575 AMXS/MABGP scheduling will verify all operations are complied with and file the WCD IAW AFI 33-364, *Records Disposition—Procedures and Responsibilities*.

14.73. (Added) 309 AMARG Aircraft Moduling & Remoduling.

14.73.1. (Added) General.

14.73.1.1. (Added) Moduling and re-moduling aircraft requires thorough pre-production planning and the involvement of multiple areas of expertise. The module program will be sustained and periodically reviewed for process improvements and potential changes in the operation or assignment of responsibilities.

14.73.1.2. (Added) Responsibility for the Moduling/Re-Moduling Program planning lies within the 578th Storage and Disposal Squadron, 578 SDS.

14.73.2. (Added) 309 AMARG Procedures and Responsibilities.

14.73.2.1. (Added) Aircraft moduling will be completed as required when landing gear and components are removed from aircraft or as required based on aircraft condition or configuration.

14.73.2.2. (Added) Aircraft re-moduling will be completed as determined by the appointed 577th Commodities Reclamation Squadron, 577 CMRS, inspection team or as required due to unique circumstances (i.e., weather-related incidents).

14.73.2.3. (Added) 309 AMARG Director of Maintenance, 578 SDS/CL, will:

14.73.2.3.1. (Added) Establish a module and remodeling program.

14.73.2.4. (Added) 309 AMARG/MXDPC Chief will:

14.73.2.4.1. (Added) Be the office of primary responsibility for the module program.

14.73.2.4.2. (Added) Develop a module replacement plan.

14.73.2.4.3. (Added) Participate in moduling/re-moduling status briefings.

14.73.2.4.4. (Added) Approve the module inspection plan provided by the 309 AMARG/MXDPC planner.

14.73.2.5. (Added) 309 AMARG Commodities Reclamation Squadron, 577 CMRS, Director will:

14.73.2.5.1. (Added) Appoint, in writing, a module inspection team made up of not less than one wood mill work lead and one reclamation mechanic.

14.73.2.6. (Added) 309 AMARG Safety Flight Chief (309 AMARG/CC-SE) will:

14.73.2.6.1. (Added) Review and approve or disapprove all Operational Risk Management (ORM) documents and worksheets on proposed moduling procedures prior to any aircraft moduling.

14.73.2.6.2. (Added) Coordinate with the 309 AMARG/MXDPC planner to ensure all safety concerns have been addressed with the moduling process. Accompany the planner to the work site to make certain all concerns have been captured.

14.73.2.7. (Added) 309 AMARG Storage Chief (309 AMARG/MXPDA) will:

14.73.2.7.1. (Added) Ensure moduling/remoduling activities are thoroughly planned by 309 AMARG/MXDPC planning.

14.73.2.7.2. (Added) Ensure assigned planners are adequately trained on ORM assessment.

14.73.2.8. (Added) 309 AMARG Reclamation Flight Chief will:

- 14.73.2.8.1. (Added)** Assign maintenance personnel to module/re-module aircraft.
- 14.73.2.8.2. (Added)** Ensure appointed personnel are familiar with moduling/remoduling procedures per moduling/remoduling process orders.
- 14.73.2.9. (Added)** 309 AMARG Storage Flight (309 AMARG/MXDPC) Planner will:
- 14.73.2.9.1. (Added)** Submit estimates to the Business Office (309 AMARG/OBW) with MDS and the hours required to perform remoduling for all aircraft.
- 14.73.2.9.2. (Added)** Develop module replacement out-year budget forecast and provide it to 309 AMARG/OBW.
- 14.73.2.9.3. (Added)** Coordinate with 309 AMRG/OBW to ensure funding is loaded against the sales order and monitor on a monthly basis.
- 14.73.2.9.4. (Added)** Develop a quarterly inspection schedule and provide inspection teams with aircraft areas to be inspected and a module inspection inventory sheet (located on M: Drive, *Module Data/Inventory Sheet*, to record findings).
- 14.73.2.9.5. (Added)** Create the job plan for module inspection for the area slated for inspection. Coordinate inspection time frame with inspection team leaders prior to distribution of work order.
- 14.73.2.9.6. (Added)** Coordinate with inspection team to verify modules condemned and record results into module inventory database.
- 14.73.2.9.7. (Added)** Conduct on-site planning meeting with assigned module team to establish plan for moduling/remoduling aircraft.
- 14.73.2.9.8. (Added)** Conduct ORM assessment during on-site planning using Safety (SE) Form 2, *Operational Risk Management Assessment* (located on M: Drive, *Module Data/SE Form*).
- 14.73.2.9.8.1. (Added)** Prior to aircraft moduling, the planner will review tasks and coordinate with the safety office on all safety concerns.
- 14.73.2.9.9. (Added)** Create job plans in 309 AMARG database for module construction, installation, transportation, and disposal.
- 14.73.2.9.10. (Added)** Research and procure rental equipment as required with approval from the division chief.
- 14.73.2.9.11. (Added)** Maintain a module inventory database and module program continuity book.
- 14.73.2.9.12. (Added)** Provide weekly activity report to 578 SDS/MXDPA Flight Chief and a module status slides for MA production meeting.
- 14.73.2.10. (Added)** 309 AMARG Commodities Support, 578 SDS/MXDPA, Flight Chief will:
- 14.73.2.10.1. (Added)** Assign wood mill personnel (309 AMARG/MXDVAA) to construct modules.
- 14.73.2.11. (Added)** 309 AMARG Reclamation Maintenance Personnel (309 AMARG/MXDPA) will:

14.73.2.11.1. (Added) Coordinate via 309 AMARG/MXDPC planner to establish an adequate module configuration and placement.

14.73.2.11.2. (Added) Serve as the module inspection authority when appointed in writing by the 577 CMRS/CL.

14.73.2.11.3. (Added) Participate in module pre-planning meetings.

14.73.2.11.4. (Added) Determine appropriate lifting points of the aircraft and module placement positions based on the aircraft-3 technical order and with coordination from engineer.

14.73.2.12. (Added) 309 AMARG reclamation wood mill personnel (309 AMARG/ MXDVAA) will:

14.73.2.12.1. (Added) Serve as the module inspection authority when appointed in writing by the 577 CMRS/CL.

14.73.2.12.2. (Added) Mark condemned modules with the letter “C” in red approximately 12 inches tall. Annotate findings on the module inventory record sheet and return to the 309 AMARG/MXDPC planner.

14.73.2.12.3. (Added) Participate in module pre-planning meetings.

14.73.2.12.4. (Added) Ensure personnel take measurements of new module and annotate on module worksheet to ensure correct size and quantity is recorded on an MDS worksheet if available.

14.73.2.12.5. (Added) Construct modules as required.

14.73.2.12.6. (Added) Maintain drawings and “cut lists.”

14.73.2.12.7. (Added) Serve on moduling/remoduling team when requested.

14.73.2.13. (Added) 309 AMARG Motor Pool supervisor will:

14.73.2.13.1. (Added) Participate in module pre-planning meetings.

14.73.2.13.2. (Added) Serve as the authority on approving ground and weather conditions for safe heavy equipment operations.

14.73.2.13.2.1. (Added) Coordinate work order with the Facilities and Equipment Flight, 309 AMARG/MXDEA, to make necessary ground repairs when required for a particular Moduling operation.

14.73.2.13.3. (Added) Coordinate with 309 SPTS/MXDEA when module storage area (Area 28) requires clean-up.

14.73.2.14. (Added) 309 AMARG Motor Pool personnel will:

14.73.2.14.1. (Added) Transport modules from the wood mill to the appropriate aircraft based on the given work order.

14.73.2.14.2. (Added) Serve as team members/heavy equipment operators on module/re-module team.

14.73.2.14.3. (Added) Transport unserviceable modules to area 28 and serviceable modules to area 18 south.

- 14.73.2.15. (Added)** The 309 AMARG Engineer/Technical Advisor will:
- 14.73.2.15.1. (Added)** Approve module design and specify weight limit for each module. Consider potential extreme weather conditions (i.e., high winds, micro bursts, etc.) and associated aerodynamic effects. Determine proper crane requirements for operation.
 - 14.73.2.15.1.1. (Added)** Provide electronic drawings of approved module designs.
 - 14.73.2.15.1.2. (Added)** Provide design analysis defining basis of module weight limit.
 - 14.73.2.15.2. (Added)** Approve module placement points on aircraft and total number of modules required.
 - 14.73.2.15.3. (Added)** Work with wood mill personnel when design adjustments are required to accommodate unique site or aircraft conditions.
 - 14.73.2.15.4. (Added)** Approve moduling/remoduling process orders (AFMC Form 561,).
- 14.73.2.16. (Added)** 309 AMARG Towing Shop personnel will:
- 14.73.2.16.1. (Added)** Serve as team members on module/re-module team when aircraft struts are required to be inflated or deflated.
 - 14.73.2.16.1.1. (Added)** Inflate and deflate struts as required.
 - 14.73.2.16.2. (Added)** Determine appropriate tie-down pattern for aircraft and aircraft components.
 - 14.73.2.16.2.1. (Added)** Secure aircraft and components as required.
 - 14.73.2.16.3. (Added)** Provide survey and layout expertise as required.
- 14.73.2.17. (Added)** 309 AMARG Business Office (309 AMARG/OBW) will:
- 14.73.2.17.1. (Added)** Ensure funds for the module program are loaded to the appropriate sales order on a quarterly basis to the commodities division for Air Force MDS's.
- 14.73.2.18. (Added)** 309 AMARG Facilities and Equipment Flight (309 SPTS/MXDEA) will:
- 14.73.2.18.1. (Added)** Ensure Area 28 is regularly cleared of unserviceable modules, identified by a red 'C'.
- 14.73.2.19. (Added)** 309 AMARG inspection team will:
- 14.73.2.19.1. (Added)** Inspect all modules annually and document results on module inventory record sheets. Provide feedback and deliver the inventory sheets to the storage flight planner to create production work orders.
 - 14.73.2.19.2. (Added)** Condemn modules that do not meet serviceability criteria per module checklist.
 - 14.73.2.19.2.1. (Added)** Using red paint, mark condemned modules with a letter "C" approximately 12 inches tall on both sides. Annotate the module type and location on the module inventory sheet provided by planner.
- 14.73.3. (Added)** 309 AMARG Module Inspection Requirements.
- 14.73.3.1. (Added)** Modules will be inspected annually by the appointed inspection team.

14.73.3.1.1. (Added) During the maintain-in, inspection crews will look for catastrophic failure of the modules and annotate on PWO. The storage flight scheduler then forwards that information to the storage flight module planner.

14.73.3.1.2. (Added) Inspection dates will be stenciled on the modules in 1” letters with black paint or stencil.

14.73.3.1.3. (Added) Formal module inspections will be conducted using the locally devised and approved checklist.

14.73.3.1.4. (Added) Modules not meeting the serviceability criteria on the module checklist are to be condemned. Using red paint, the inspection team will mark condemned modules with a letter “C” approximately 12 inches tall and the date the module was condemned in a black marker below the red ‘C’.

14.73.3.1.5. (Added) Formal module inspections and results will be documented on the module inventory record sheet and forwarded to 578 MXDPB planner to be added to the module inspection database on M drive.

14.73.4. (Added) 309 AMARG Moduling/ReModuling Operation Requirements.

14.73.4.1. (Added) All moduling or remoduling operations must meet the following on-site requirements:

14.73.4.1.1. (Added) Applicable technical data, PWOs, process orders, and completed SE Forms 2 are required for each moduling/remoduling task. Each operation will be individually planned and take into account unique aircraft configuration requirements.

14.73.4.1.2. (Added) All participating personnel will be briefed by the on-site supervisor on moduling/remoduling operations and safety procedures prior to beginning the task. (see Attachment 14.73.A1.). These briefings will be included in participating shops’ supervisor safety briefings and documented on the AFMC Form 316.

14.73.4.1.3. (Added) The motor pool supervisor will assess ground conditions prior to beginning the task to ensure satisfactory ground conditions, safe weather conditions, and adequate equipment availability to conduct the assigned task.

14.73.4.1.4. (Added) Follow the instructions of the on-site supervisor.

14.73.4.1.5. (Added) Use only approved equipment authorized per approved process order when conducting moduling/remoduling operations.

14.73.4.2. (Added) Store serviceable modules in Area 18 south.

14.73.4.3. (Added) Store unserviceable modules in Area 28.

14.73.5. (Added) 309 AMARG documentation.

14.73.5.1. (Added) Modules condition and inventory will be accounted and documented using aircraft Production Control Number, tail number and location of aircraft on module inventory record sheet (located on M drive under M: MODULE DATA).

14.73.5.2. (Added) The module inspections will be transferred and recorded in the module database (located on M drive under M: MODULE DATA\2006 Module data).

14.74. (Added) 309 AMARG Overland Movement of Aircraft.

14.74.1. (Added) 309 AMARG Responsibilities and Procedures.

14.74.1.1. (Added) Resources Management Division, Workload Branch (309 AMARG/OBW) will:

14.74.1.1.1. (Added) Work with the customer to determine project needs, the number of units, mode of transportation, destination, delivery dates, etc. See How TOs for input guidance accessed on the 309 AMARG intranet at <http://amnet/>. Click on Documentation How TOs.

14.74.1.1.2. (Added) Record all customer information on the overland checklist.

14.74.1.1.3. (Added) Attend project work group meetings called by the process leader.

14.74.1.1.4. (Added) Generate the Request for Quote (RFQ) to obtain the information necessary to provide a cost estimate to the customer.

14.74.1.1.5. (Added) Coordinate between the customer and Commodities Directorate, Reclamation Flight, Packaging and Shipping Section (309 SPTS/MXDVC), Transportation Specialist to discuss transportation issues (i.e., specific packaging requirements permit or escort requirements, deviations, waivers and required delivery date).

14.74.1.1.6. (Added) Generate a Sales Order (SO) with all the available information. Ensure all the specific instructions pertaining to packaging and transportation, not included on checklists or technical publications are specified in the SO, i.e., special crating, mark for shipping instructions, freight forwarding, required delivery date, ship to information and the office preparing the shipping document, etc.

14.74.1.1.7. (Added) Review the C03. Coordinate with the storage directorate, special assets branch when items are in a storage warehouse that are to be returned to the aircraft, shipped to follow or are not required. Inform special assets branch of the delivery destination code if it is to process the items from storage back to the aircraft.

14.74.1.1.8. (Added) Prepare the DD Form 1149, *Requisition and Invoice/Shipping Document*, in eight copies when the aircraft are to be transferred from the Air Force account and will not be assigned to the Air Force Special Defense Property Disposal Account (FR2373). Ensure the DD Form 1149 is sent to Disposal Flight to perform a radiation (RAD) check and hazardous material identification. The DD Form 1149 is then sent to the 309 AMARG AVDO for signature of a records review.

NOTE: (Added) The Naval Inventory Control Point, Detachment FSO prepares the DD Form 1149 for Navy workloads.

14.74.1.1.9. (Added) Verify the aircraft status is correct and notify the 309 AMARG AVDO to update or change the status.

14.74.1.1.10. (Added) Ensure the 309 AMARG Engine Manager is notified to update the engine status records.

14.74.1.1.11. (Added) Maintain documents authorizing aircraft loans, ensure the aircraft status is updated to reflect the recipient, location and date the aircraft was moved. Coordinate with the disposal flight prior to committing to loan an aircraft on account FR2373.

14.74.1.2. (Added) 309 AMARG/OB Aircraft Disposition Officer for aircraft in the FR2373 account will:

14.74.1.2.1. (Added) Prepare the DD Form 1149, in four copies when an aircraft is transferred to active inventory status. Send the form to 309 AMARG AVDO who will sign the receipt for the aircraft, keep two copies and return two copies.

14.74.1.2.2. (Added) Give the 309 AMARG Engine Manager copy seven of the DD Form 1149 transfer to active status.

14.74.1.2.3. (Added) Attend preplanning/preproduction work group meetings for aircraft.

14.74.1.2.4. (Added) Upon receipt of a customer request for aircraft for overland shipment of excess aircraft coordinate with 309 AMARG/OBW. See paragraph 14.74.1.1.4.

14.74.1.2.5. (Added) Send customer project funding to the financial services division (/309 AMARG/FMF) to create the project.

14.74.1.2.6. (Added) Prepare DD Form 1149 in eight copies if an aircraft is being transported overland. Send a copy of the form to 309 AMARG AVDO. Send six copies to the packaging/shipping section and retain one copy.

14.74.1.2.7. (Added) Review the C03 and coordinate with the special assets branch who generates the DD Form 1348-1As for shipping the C03 assets and route them with the aircraft, when parts are in storage for the departing aircraft. Determine if the parts are to be shipped with the aircraft, shipped separately or not required. Inform the special assets branch of the delivery destination if the parts are returned to the aircraft.

14.74.1.2.8. (Added) Notify technical order library and records branch aircraft records of the transfer, sign for and pick up the aircraft records.

14.74.1.2.9. (Added) Ensure the aircraft records are shipped with the aircraft.

14.74.1.3. (Added) 309 AMARG when the GSA representative is responsible for the aircraft, he or she must review the C03 and coordinate with special assets branch to return the parts to the aircraft, shipped to follow or not required. Inform special assets branch of the destination if the items are to be returned to the aircraft.

14.74.1.3.1. (Added) 309 AMARG Engine Manager will:

14.74.1.3.2. (Added) Attend and participate in the project work group meetings.

14.74.1.3.3. (Added) Enter pertinent engine work information on the RFQ screen.

14.74.1.3.4. (Added) Process excess engines.

14.74.1.3.5. (Added) Update engine status in the owning service's engine management system and the 309 AMARG system.

14.74.1.3.6. (Added) Ensure engine records are shipped with the engines.

14.74.1.4. (Added) 309 AMARG the applicable process 577 CMRS and, storage division planner will:

14.74.1.4.1. (Added) Assign the project planner who will call for a work group meeting.

14.74.1.4.2. (Added) Coordinate with 577 CMRS, special assets branch , and wood mill section to determine the man-hours, materials, and equipment required to perform the project.

14.74.1.4.4. (Added) Complete the RFQ with the project requirements man-hours and equipment required to perform the project.

14.74.1.4.5. (Added) If the customer has not provided specific aircraft disassembly instructions, coordinate with the disposal flight and packaging/shipping section, to determine the disassembly based upon transportation, packaging and destination requirements. Coordinate with SE to determine the need for and prepare an ORM study.

14.74.1.4.6. (Added) Make an entry in the workbook stating that all items removed and in storage, are to be in or with the aircraft and ready for shipment.

14.74.1.4.7. (Added) Prepare the work package, quantity and part number of tools and equipment list, with technical manual references and customer requirements.

14.74.1.4.8. (Added) Send the tool and equipment list to forward supply to see what is available.

14.74.1.4.9. (Added) When tools are not available, coordinate with other maintenance divisions to possibly borrow tools.

14.74.1.4.10. (Added) When equipment and tools are NOT available at 309 AMARG:

14.74.1.4.10.1. (Added) Contact other government agencies. If the owner agrees to a loan, send a message to them and identify the item by type and part number, confirming the need for the item. Include the name of the borrower, length of time the item is required, shipping information and any other pertinent information.

14.74.1.4.10.2. (Added) Notify forward supply if the equipment/tools are being shipped.

14.74.1.4.10.3. (Added) Request 309 AMARG/OBW notify the customer that the project may be delayed until the equipment/tools can be secured.

14.74.1.4.10.4. (Added) Assist with the pick-up and delivery of items borrowed from other organizations, i.e., Arizona Air National Guard, Luke Air Force Base, Navy at San Diego or China Lake, etc.

14.74.1.4.10.5. (Added) Ensure the borrowed items are returned to the loaner when agreed, requested or no longer needed.

14.74.1.5. (Added) 309 AMARG, 577 CMRS, scheduler will:

14.74.1.5.1. (Added) Request the C03 in three copies when the project is initiated. Send one copy to the crew chief, one copy to special assets branch and one to 309 AMARG/MAWW Disposal Flight or the GSA monitor.

14.74.1.5.2. (Added) Coordinate with the packaging/shipping section transportation specialist to determine if reverse scheduling will apply for specific delivery dates.

14.74.1.5.3. (Added) Schedule the aircraft into work; coordinate with woodmill scheduler as and when applicable. Adjust schedules or coordinate with 309 AMARG/OBW if there are delays or lack of personnel.

14.74.1.5.4. (Added) Notify applicable planners when the project is completed if tools were loaned.

14.74.1.6. (Added) 309 AMARG Special Assets Branch will:

14.74.1.6.1. (Added) When notified, process the inputs to generate paperwork for returning items listed on the C03, back to the aircraft or to ship.

14.74.1.6.2. (Added) Give all the paperwork to the personnel to pull the items from the warehouse.

14.74.1.6.3. (Added) Notify the item manager to provide disposition instructions for those items on the C03 that are not returned/shipped with the aircraft.

14.74.1.6.4. (Added) Process the shipments or demilitarization actions as directed by the item manager.

14.74.1.7. (Added) 309 AMARG. The appropriate 577 CMRS crew chief will:

14.74.1.7.1. (Added) Comply with the instruction in the workbook for the project.

14.74.1.7.2. (Added) Identify and mark each separate component, piece, or box that belongs to the aircraft with the PCN and nomenclature. Place loose hardware and other small pieces in a box.

14.74.1.7.3. (Added) Obtain the aircraft records from TO library/records branch and secure in the fuselage with all loose equipment.

14.74.1.7.4. (Added) Coordinate with the special assets branch to have stored items returned to the aircraft. Sign for each item and place them in or with the aircraft.

14.74.1.7.5. (Added) Notify the scheduler of any delays, personnel availability, aircraft completion, etc.

14.74.1.7.6. (Added) When the work is completed, deliver the aircraft to the packaging/shipping section.

14.74.1.7.7. (Added) Sign and return the workbook to the 577 CMRS Scheduler.

14.74.1.7.8. (Added) Notify SE with an e-mail or phone if any hazardous material is on board the aircraft, and return the workbook for planner modification. Coordinate with SE if any radioactive items have been removed, and return the workbook for planner modification.

14.74.1.8. (Added) 309 AMARG 577 CMRS Scheduler will:

14.74.1.8.1. (Added) Ensure the status of the work is current, and the C stamp requirement is met IAW AFI 36-2232, AFMC Sup 1.

14.74.1.8.2. (Added) Prepare the DD Form 1348-1, *Single Line Item Release/Receipt*, document as required, to comply with the shipping mode. Send the DD Form 1348-1 to the 309 AMARG RSO and forward after verifying all radiation surveys (if required) are returned with no contamination found. Forward overland book to the packaging/shipping section transportation specialist.

EXCEPTION: (Added) Packaging/shipping section trained RAD monitor may release aircraft engines.

14.74.1.9. (Added) 309 AMARG packaging/shipping section transportation specialist will:

14.74.1.9.1. (Added) Type the RAD certification from SE on the DD Form 1348-1, if known, or forward to SE for the RAD certification. (See paragraph 14.74.1.13.)

14.74.1.9.2. (Added) Upon return of the DD Form 1348-1, send the form to the packaging/shipping section transportation assistant.

14.74.1.10. (Added) 309 AMARG on receipt of the DD Form 1348-1 the woodmill will:

14.74.1.10.1. (Added) Ensure loose items are secured.

14.74.1.10.2. (Added) Accept parts in wooden containers from outside storage from the special assets section (309 AMARG/MXDUAC) and sign the document.

14.74.1.10.3. (Added) Notify the scheduler to arrange the final sealing.

14.74.1.10.4. (Added) Send the shipping document to the packaging/shipping section transportation specialist upon completion.

14.74.1.11. (Added) 309 AMARG packaging/shipping section will:

14.74.1.11.1. (Added) Coordinate with the customer and 309 AMARG/MAWW on the mode of transportation.

14.74.1.11.2. (Added) Upon receipt of the overland book, packaging/shipping section transportation specialist will review for accuracy and correctness related to transportation issues, i.e., valid lower explosive limit, documented material safety data sheets for hazardous materials (HAZMAT), swipe surveys, etc.

14.74.1.11.2.1. (Added) Upon receipt of the DD Form 1149 review for accuracy and contact customer to reconfirm delivery date.

14.74.1.11.2.2. (Added) When the aircraft is ready to ship, coordinate with the 355th Logistics Readiness Squadron, Traffic Management Flight (355 LRS/LGRT) (freight forwarder for Foreign Military Sales shipments) for a carrier required to ship the aircraft.

14.74.1.11.3. (Added) 309 AMARG. When the aircraft has departed:

14.74.1.11.3.1. (Added) Complete the project and notify 309 AMARG/OBW. Send a copy of the shipping document, marked with the name of the carrier, departure date and shipping destination to AVDO and to the supply flight.

14.74.1.11.3.2. (Added) Forward the original shipping document to the supply flight. If the aircraft was shipped from the FR2373 account, send the original document to the disposal flight.

14.74.1.11.3.3. (Added) Notify 309 AMARG/OBW, 577 CMRS and the special assets branch to notify the customer of the aircraft departure and of any problems that delays departure.

14.74.1.12. (Added) 309 AMARG Safety will ensure all DD Forms 1149 and DD Forms 1348-1 requiring RAD check certification and hazardous material identifications are returned to the packaging specialist upon receipt, but not later than 2 working days.

14.74.2. (Added) ALL 309 AMARG activities will retain documents for 1 year. The documents will be referenced by date or document number and used for future jobs, which will eliminate unnecessary work group meetings. After 1 year, if the requirement still exists, create a new RFQ or update the old one in coordination within 577 CMRS, 309 SPTS and 309 AMARG/ OB.

14.75 (Added) 309 AMARG Aerospace Vehicle Inventory Control.

14.75.1. (Added) 309 AMARG General.

14.75.1.1. (Added) The system is designed to provide inventory visibility, location and status data of all aircraft, missiles and aerospace ground vehicles located at 309 AMARG.

14.75.1.2. (Added) The status data allows for identity of labor and materials for cost accounting, billing and utilization data.

14.75.1.3. (Added) The program provides a location system for aerospace vehicle location control and summarizes the 309 AMARG aircraft storage acreage by area, reflecting usage versus availability.

NOTE: (Added) Although the term *aircraft* is used in subsequent paragraphs, these same procedures apply to missiles and aerospace ground vehicles.

14.75.2. (Added) 309 AMARG Responsibilities. The 309 AMARG Resource Management Division, Workload Branch AVDO will serve as the central point of contact for the 309 AMARG aircraft status reporting system.

14.75.3. (Added) 309 AMARG Initial Status Load.

14.75.3.1. (Added) When an aircraft arrives and is initially parked and secured, the aircraft commander releases the aircraft and the aircraft records are taken to the storage division, 309 AMARG/MATR.

14.75.3.2. (Added) Aircraft commanders will be relieved of the aircraft and its associated records by completing AF Form 290, for AF and a *Vehicle Delivery Receipt*, for all Army Navy and other services owned aerospace vehicles.

14.75.3.3. (Added) On receipt of the aircraft records, receiving branch will extract the required data and notify 309 AMARG/MAWW AVDO to process the aircraft into the system. The aircraft status record must be loaded immediately to process direct man-hours.

NOTE: (Added) If the aircraft arrival is an overland shipment, take the records to receiving branch. The procedures for loading the aircraft status record are the same.

14.75.3.4. (Added) 309 AMARG AVDO will prepare a new equipment record and input the data to the 309 AMARG/MAXIMO Main Equipment Record. See How To (HT) 180, Using MAXIMO, at the 309 AMARG intranet at <http://amnet> then click on documentation, click on How Tos and scroll down to the applicable How To. This will provide the PCN and aircraft project number, assign the aircraft commodity code, ownership code, type aircraft code and ID number. (See HT 150, *Standard Codes Used in 309 AMARG*).

14.75.4. (Added) 309 AMARG Status Changes. After loading the aircraft status record, changes may occur that affect the status, such as movement of aerospace vehicles to other locations, project changes, ownership changes, work completion and departures, status code changes, etc. (See HT 150.)

14.75.4.1. (Added) Towing Branch will change the aircraft location. (See How To 800, *Updating Equipment Locations*.)

14.75.4.2. (Added) Upon receipt of an AFMC Form 181, or other documentation, AVDO will change the aircraft status when one or more changes occur: Navy Stricken Aircraft Reclamation Disposal Project (SARDIP) number, project number, status code changes and type code and 309 AMARG ID number (interservice transfer).

14.75.4.3. (Added) When services identify aircraft as excess, AVDO will prepare a DD Form 1348-1A, and send to the disposal flight to cover the following situations:

14.75.4.3.1. (Added) Air Force aircraft that are assigned to a valid reclamation Reclamation and Reclamation Insurance Type RIT project when declared excess and are transferred from the storage account to the AF Special Defense Property Disposal Account (AFSDPDA).

14.75.4.3.2. (Added) Navy aerospace vehicles, when declared excess, are not transferred to the AFSDPDA account and, therefore, will not be listed in a disposal category unless assigned to a formal reclamation project. Certain Navy aircraft that are stricken for the FMS or Security Assistance Program will be assigned to a Navy inviolate storage 1000 and 2000 preservation project.

14.75.4.3.3. (Added) Army aircraft that are declared excess are placed in a pseudo reclamation project (ARP 998 or 999) if they are to be transferred or donated to a government agency; otherwise, they are transferred to a valid reclamation project or to RIT. Aircraft in a pseudo reclamation project undergoing GSA screening must have freeze code 2 assigned to prevent parts removal from the aircraft.

14.75.4.3.4. (Added) Coast Guard aircraft will be processed in the same manner as Army aircraft, except that the project will be CRP999.

14.75.4.4. (Added) On receipt of AFMC Form 181 309 AMARG/OBWW will issue the SO IAW 309 MXW Sup 1 to AFI 21-101, Chapter 18 for all applicable work processes.

14.75.4.5. (Added) On receipt of the SO, the applicable process scheduler will schedule the work.

14.75.4.5.1. (Added) If the schedule cannot be followed, notify 309 AMARG/OBWW to arrange for additional man-hours.

14.75.4.5.2. (Added) Based on the information from the scheduler, 309 AMARG/OBWW may negotiate additional man-hours from the customer and add them to the SO.

14.75.4.6. (Added) 309 AMARG AVDO will input the project change, **309** AMARG aircraft status code and type preservation code. On receipt of notification for an aircraft status change when the work is completed, or the aircraft departs or it is transferred, process the notification documentation as follows:

14.75.4.6.1. (Added) For process in aircraft, from the completed PWO:

14.75.4.6.1.1. (Added) **309 AMARG** AVDO will input the 309 AMARG aircraft status code based on the project, for the storage categories as follows:

14.75.4.6.1.1.1. (Added) SB – Extended Storage.

14.75.4.6.1.1.2. (Added) TA – Non-extended.

14.75.4.6.1.2. (Added) 309 AMARG/MAT scheduler will input the preservation date when the PWO closes.

14.75.4.6.1.3. (Added) For mobility upgrade aircraft, input the following codes:

14.75.4.6.1.3.1. (Added) TD – Work status used for capturing mobility aircraft costs on the initial upgrade.

14.75.4.6.1.3.2. (Added) TE – Work status used for capturing mobility aircraft costs on the annual upgrade.

14.75.4.6.2. (Added) 309 AMARG. For flyaway aircraft:

14.75.4.6.2.1. (Added) Ensure the HAZMAT declaration is on the DD Form 1149, , or DD Form 1348 shipment document as required by 49 CFR, *Transportation*. Coordinate with 577 CMRS, Packaging and Shipping Flight specialist for assistance.

14.75.4.6.2.2. (Added) 309 AMARG Control notifies AVDO that the aircraft has departed and then gives the completed DD Form 1149 to AVDO.

14.75.4.6.2.3. (Added) 309 SPTS, Supply A Section sends the PWO to 309 AMARG AVDO when the project is closed in their system.

14.75.4.6.2.4. (Added) 309 AMARG AVDO will:

14.75.4.6.2.4.1. (Added) Make one copy of the DD Form 1149 and keep in file.

14.75.4.6.2.4.2. (Added) Input the data to the aircraft status record.

14.75.4.6.2.4.3. (Added) Attach the PWO and send it to the TO Library/records for filing.

14.75.4.6.2.4.4. (Added) On receipt of DD Form 1149, and PWO for AF aircraft, prepare and transmit a loss message to HQ AFMC/LGXC-AVDO and the gaining organization. File the message in the aircraft folder. Ensure the DD Form 1149 and PWO are included.

14.75.4.6.2.3.5. (Added) Ensure the A F aircraft has been terminated from REMIS.

14.75.4.6.3. (Added) For aircraft departing by surface or airlift:

14.75.4.6.3.1. (Added) Ensure the HAZMAT declaration is on the DD Form 1149 or DD Form 1348 shipment document as required by 49 CFR. Coordinate with packaging and shipping specialist for assistance.

14.75.4.6.3.2. (Added) Packaging/shipping or towing will notify 309 AMARG Control, who will immediately notify 309 AMARG AVDO of the departure.

14.75.4.6.3.3. (Added) Packaging/shipping will also send the DD Form 1149 and the PWO to 309 AMARG AVDO.

14.75.4.6.3.4. (Added) If museum program aircraft are transferred, 309 AMARG/OBW will prepare a DD Form 1149 and give it to towing on a tow to the gate for the contractor scenario.

14.75.4.6.3.5. (Added) If it will be handled by packaging/shipping, the prepared DD Form 1149 will be sent to them.

14.75.4.6.3.6. (Added) 309 AMARG AVDO will:

14.75.4.6.3.6.1. (Added) Make a copy of the DD Form 1149 and attach to the file copy of the PWO.

14.75.4.6.3.6.2. (Added) Input the data from the DD Form 1149 to the aircraft status record.

14.75.4.6.3.5.3. (Added) Ensure AF aircraft has been terminated from REMIS.

14.75.4.6.3.6.4. (Added) Prepare an aircraft file folder. Ensure the DD Form 1149 and PWO are filed in folder. Attach the original DD Form 1149 to PWO and send it to TO library/ records branch for filing.

14.75.4.6.4. (Added) 309 AMARG for reclamation and demilitarization (DEMIL) aircraft:

14.75.4.6.4.1. (Added) Packaging/shipping scheduler will verify all Due In for Repair (DIFR) have been processed.

14.75.4.6.4.2. (Added) Packaging/shipping scheduler or expediter will check the status of DIFRs by accessing <https://amnet.dm.af.mil> and clicking on applications. Click on planning screen and save list status. Select the save list project from the SO number list and click on the box Open Parts by ACFT. The expediter and scheduler will review the Status and HIGH_OP columns and track down any parts that appear to have problems.

14.75.4.6.4.3. (Added) When all PWOs from the master PWO are cleared, 577 CMXS will notify 309 AMARG AVDO via e-mail.

14.75.4.6.4.4. (Added) On receipt of notification, 309 AMARG AVDO will change the aircraft status from PD to PA.

14.75.4.6.4.5. (Added) When all aircraft on the project have been reclaimed and DEMIL'd if applicable, the packaging/shipping scheduler will send an e-mail to 309 AMARG AVDO.

14.75.4.6.4.6. (Added) On receipt of the e-mail, 309 AMARG AVDO will change the status from PA to PJ.

14.75.4.6.5. (Added) 309 AMARG for excess aircraft that are transferred by disposal flight, i.e., to DRMO for sale or scrap, GSA screening or donations disposal flight will notify AVDO in writing. Also, see HT 420, DRMO/DEMIL Process.

14.75.4.6.6. (Added) When aircraft depart 309 AMARG, disposal flight or 309 AMARG/OBW will:

14.75.4.6.6.1. (Added) Prepare a DD form 1149 IAW 309 MXW Sup 1 to AFI 21-101, Section 14.74. to show departure date, destination, and to whom released.

14.75.4.6.6.2. (Added) If the aircraft is transferred to DRMO, prepare a DD Form 1348-1.

14.75.4.6.6.3. (Added) If aircraft are transferred to another service or a non-excess project, prepare a DD Form 1149.

14.75.4.6.6.4. (Added) Ensure the HAZMAT declaration is on the DD Form 1149 or DD Form 1348 shipment document as required by 49 CFR. Coordinate with packaging/shipping specialist for assistance.

14.75.4.6.7. (Added) Upon receipt of the completed DD Form 1149 or DD Form 1348-1, 309 AMARG AVDO will update the aircraft status equipment record accordingly.

14.75.4.7. (Added) 309 AMARG AVDO will input changes to the aircraft status record (i.e., project and status code on receipt of documentation assigning an aircraft to a reclamation project).

14.75.4.8. (Added) For A F aircraft, prepare a termination message and send it to HQ AFMC/LGXC-AVDO and other organizations as applicable. Terminate aircraft from the Air Force inventory and put a copy of the message in the aircraft file. Ensure the message with

authority for reclamation is included in the file. On all other services keep the file for 1 year and then dispose of it.

14.75.4.9. (Added) 309 AMARG. Classified material removal:

14.75.4.9.1. (Added) All aircraft received and stored at 309 AMARG will have classified equipment removed.

14.75.4.9.2. (Added) Upon notification that classified equipment and material are completely removed, 309 AMARG AVDO will input the information to the aircraft equipment record. (See HT 810)

14.75.5. (Added) 309 AMARG Inquiries. A query can be processed for information regarding aircraft status, see HT 900, *Creating a Query*. Most of the data input by AVDO is located in aircraft or equipment tables. (See How To 103, *List of Tables* to see what is in each table.)

14.75.6. (Added) 309 AMARG Aerospace Vehicle Annual Inventory. An annual physical inventory will be conducted of all aerospace vehicles at 309 AMARG. This inventory will validate the aircraft status records and physical location of each aerospace vehicle within the confines of 309 AMARG. Towing will act as the OPR and focal point for this action.

14.75.6.1. (Added) The 309 AMARG Director of Business Operations (309 AMARG/OB) will appoint, in writing, an Aircraft Inventory Manager and assign team members from production overhead RCC.

14.75.6.1.1. (Added) 309 AMARG AIM will:

14.75.6.1.1.1. (Added) Coordinate all facets of the physical inventory, draw manpower, transportation, and communications resources as required and assign teams.

14.75.6.1.1.2. (Added) Be responsible to obtain manpower for the count teams and ensure their training.

14.75.6.1.1.3. (Added) Obtain report data and support.

14.75.6.1.1.4. (Added) Monitor field operations.

14.75.6.1.1.5. (Added) Assist towing in reconciling discrepancies.

14.75.6.1.1.6. (Added) Provide the count team with a printout of the current aircraft status directory. They will record serial number discrepancies on the directory. The engine manager will research engine discrepancies. An inventory team member will research aircraft serial number discrepancies. The teams will record location discrepancies on AF Forms 3126, and give it to towing. All discrepancies must be corrected before the inventory is completed.

NOTE: (Added) The count team will change row markers during the inventory if row sequence is not correct.

14.75.6.1.1.7. (Added) Submit periodic reports during the inventory and a written summary of the entire inventory within 1 week of completion. Send one copy of the summary to the 309 AMARG Commander.

14.75.6.2. (Added) Towing will update the locations on receipt of the annotated AF Forms 3126.

14.75.6.3. (Added) The count team will verify that all changes have been made by processing a new aircraft status directory.

14.75.7. (Added) 309 AMARG Aircraft Status Data Control Procedures.

14.75.7.1. (Added) Status Inputs. See “How To 180”, Using MAXIMO, for status inputs. Use the aircraft type code and the 309 AMARG Aircraft ID number to identify the aircraft for all status inputs.

14.75.7.2. (Added) Navy SARDIP. To input Navy SARDIP into aircraft status record use the project number in the Aircraft status record or the input must be NRP nnn (nnn represents the SARDIP number). Navy status code in aircraft status record or input must be 1R, 2R, 3R or 4R.

14.75.7.3. (Added) Interservice transfer (aircraft remains in 309 AMARG but the ownership changes from one service to another.) The first position of 309 AMARG status code must be TA or SB. AVDO will:

14.75.7.3.1. (Added) Determine the new aircraft type code. If not previously loaded, use a new aircraft type code and 309 AMARG ID number. (See HT 150.)

14.75.7.3.2. (Added) 309 AMARG input the status records for the new aircraft:

14.75.7.3.2.1. (Added) Use a compatible storage project of the gaining service.

14.75.7.3.2.2. (Added) Use the actual arrival date.

14.75.7.3.2.3. (Added) Owner is the gaining service.

14.75.7.3.2.4. (Added) The Naval inventory control point, FSO will provide the navy status code.

14.75.7.3.2.5. (Added) 309 AMARG status code is SB or TA.

14.75.7.3.2.6. (Added) Aircraft type code of the losing service.

14.75.7.3.2.7. (Added) 309 AMARG ID number of the losing service.

14.75.7.4. (Added) 309 AMARG Transfer/Donation of Aircraft Declared Excess by Owning Service. Aircraft must be placed in an interim excess/reclamation project in order to input compatible departure codes.

NOTE: (Added) Must be PE, PF, PG or PH status.

14.75.7.5. (Added) 309 AMARG Narrative Fields. The comments section is used for storing narrative information (see MAXIMO equipment record). This information will print in the NAVAIR 4850 Report.

14.75.7.6. (Added) 309 AMARG Navy status code/SARDIP number. When a Navy aircraft is assigned to a formal reclamation project, the Navy status code must be changed and a SARDIP number must be input to the record. To input an assigned SARDIP number, if the Navy status code in the aircraft status record is *n S*, the Navy status code must be changed to *n R*, the numeric character (n) remaining unchanged. Assignment of SARDIP number by the Navy is authority to change the second position of the Navy status code from *S* to *R*.

14.75.7.7. (Added) 309 AMARG Freeze Codes. Freeze codes are assigned to control reporting and priority removal actions. Priority removals 01-08 are prepared only if the requester is the owning service or the owning service has authorized removals for the requester for aircraft

assigned freeze codes. Freeze codes preclude removal notices for all priority request 09-15, Category B, regardless of the requester. The following freeze codes are those authorized for use in the 309 AMARG Inventory control/Status System:

14.75.7.7.1. (Added) Freeze Code 1 is reserved. Requires approval by higher headquarters.

14.75.7.7.2. (Added) Freeze Code 2 is entered for aircraft that are commercially saleable and require GSA screening.

14.75.7.7.3. (Added) Freeze Code 3 is entered for aircraft that have been placed on reclamation projects and a *Hold* is required; it is also on any other aircraft projects that require a *Hold*. For other than Navy aircraft, when Freeze Code 3 is entered, the work *Hold* and authority for the action (letter or other documentation) will be entered in the Remarks section of the indicative data input record. This area will serve as narrative field until an aerospace vehicle departs 309 AMARG. No entry should be made for Navy aircraft since this field may already contain information used for NALC 4850 reporting.

14.75.8. (Added) 309 AMARG Project Number Assignment. All Air Force aerospace vehicles are identified to a valid project, by higher authority, prior to delivery to 309 AMARG. However, Army, Navy and Coast Guard aerospace vehicles are not normally assigned to official projects until reclamation or withdrawal action occurs; therefore, upon receipt, a project number will be assigned by 309 AMARG/MAWW in conjunction with the information received from the owning service. Aerospace vehicles cannot be accepted by 309 AMARG without initial assignment to storage project upon receipt. Standardized structure for aircraft storage project numbers are documented in How To (HT) 150.

14.75.9. (Added) 309 AMARG Air Force Aircraft Reconciliation. Twice each year 309 AMARG AVDO coordinates with the material systems group to obtain a text file of the AF inventory in REMIS. HT 810 provides the steps to create a comparison of REMIS versus MAXIMO.

14.76 (Added) 309 AMARG Aircraft Parking Plan.

14.76.1. (Added) General. This instruction establishes the Aircraft Parking Plan Council and provides guidance for the implementation of the 309 AMARG Parking Program. The plan calls for all Defense Reutilization and Marketing System (DRMS), RIT aircraft to be stored East of Kolb Road. It also establishes that all storage, flyable hold and museum aircraft will be stored West of Kolb Road. In conjunction with the 309 AMARG Vision 2015 Plan, the council shall develop a 5-year plan for placing current and incoming aircraft/assets in specific areas and storage facilities.

14.76.2. (Added) Parking Plan Council. The parking plan council, herein after called “council”, will be made up of representatives from each directorate and specialized members, to include but not limited to, 309 AMARG Safety (309 AMARG/CC-SE), 309 AMARG Environmental (309 AMARG/QPE), 309 AMARG Treaty Compliance Office (309 AMARG/OBX-1), 309 AMARG Quality Assurance (309 AMARG/QA), and chaired by the 578 SDS/CL. The council will meet as necessary, but not less than quarterly, to work issues associated with the 309 AMARG parking plan. The council will determine area utilization and parking patterns based on DoD customer’s requirements and information provided by the 309 SPTS Tooling/Special Assets. Additionally, they shall assist the 309 AMARG Board of Directors (BoD) in making decisions on aircraft parking and shall manage aircraft parking within

309 AMARG property. Their scope shall include, but is not limited to providing an efficient layout of aircraft parking/asset storage in response to customer needs, property use, and reclamation. The council will provide the BoD, no later than 1 January each year, the annual parking plan for review.

14.76.3. (Added) 309 AMARG Responsibilities.

14.76.3.1. (Added) The 578 SDS/CL shall be the council chairperson.

14.76.3.2. (Added) 309 AMARG council chairperson shall:

14.76.3.2.1. (Added) Act as the chairperson for all scheduled meetings.

14.76.3.2.2. (Added) Consult/coordinate with the BoD for any deviations to the parking plan as a result of the parking plan meeting.

14.76.3.2.3. (Added) Provide briefings on recommendations of the council to the 309 AMARG Commander and BoD for their approval/disapproval.

14.76.3.2.4. (Added) Request BoD resolution when the council is unable to come to a mutual decision on difficult issues.

14.76.3.2.5. (Added) Provide a briefing to the commander and BoD, annually during the month of January addressing future parking plans and specific issues requiring BoD approval.

14.76.3.2.6. (Added) Provide a recorder who will record and distribute minutes of the council meetings.

14.76.3.3. (Added) 309 AMARG Council shall:

14.76.3.3.1. (Added) Approve the annual parking plan review.

14.76.3.3.2. (Added) Develop the 309 AMARG Parking Plan.

14.76.3.3.3. (Added) Develop a 2-5 year execution plan.

14.76.3.3.4. (Added) Develop and implement metrics.

14.76.3.3.5. (Added) Coordinate with the 309 AMARG Workload Division (309 AMARG/OBWW) on all incoming aerospace assets.

14.76.3.3.6. (Added) Coordinate with the 309 AMARG Strategic Arms Reduction Treaty (START) Program Manager (309 AMARG/OB) if any asset is being placed in Areas 3, 24, or 26.

14.76.3.3.7. (Added) Coordinate with the disposal flight on current and all future aircraft arrival schedules.

14.76.3.3.8. (Added) Coordinate with towing on all areas relating to parking and movement of aerospace vehicles.

14.76.3.3.9. (Added) Coordinate with the disposal flight in order to determine future available space for incoming aircraft.

14.76.3.4. (Added) 309 AMARG master scheduler shall:

14.76.3.4.1. (Added) Provide a projection of all aircraft scheduled to arrive and/or depart 309 AMARG with current and future years.

14.76.3.4.2. (Added) Identify new MDS requiring special action.

14.76.3.5. (Added) The 309 AMARG Aircraft Disposition Officer shall provide an updated listing of all aircraft currently involved in GSA screening and aircraft released to DRMS to the parking plan committee.

14.76.3.6. (Added) The supervisor, towing section shall:

14.76.3.6.1. (Added) Appoint necessary personnel in support of the council.

14.76.3.6.2. (Added) Provide technical support and information regarding ground conditions, area obstacles, the most effective parking patterns, and space utilization.

14.76.3.6.3. (Added) Based on the council's recommendation, survey and lay out areas for aircraft.

14.76.3.7. (Added) 309 SPTS shall:

14.76.3.7.1. (Added) Appoint necessary personnel in support of the council.

14.76.3.7.2. (Added) Identify space requirements based on workload projections for the storage of special tooling/special test equipment, Standard Base Supply Systems assets, courtesy storage, empty helicopter blade boxes, and a staging area for incoming/outgoing assets.

14.76.3.7.3. (Added) Coordinate with 309 AMARG/OBW to decide whether assets will be stored inside or outside.

NOTE: (Added) Requirements will be based on workload projections supplied by 309 AMARG/OBW.

14.76.3.7.4. (Added) Conduct an annual review to ensure adequate space is available to meet current and future needs by NLT 31 October of each year.

14.76.3.8. (Added) 309 AMARG Chief, Facilities Office (309 SPTS/MXDEA) shall:

14.76.3.8.1. (Added) Ensure necessary assigned personnel are available to the council for special projects, updated mapping requirements, and AutoCAD support.

14.76.3.8.2. (Added) Based on maps provided to the council, coordinate projects that impact the parking and staging of aircraft and related parts.

14.76.3.9. (Added) The 309 AMARG XP-2 shall provide guidance in order to ensure that 309 AMARG is in compliance with the Strategic Arms Reduction Treaty site diagram.

14.77. (Added) Housekeeping and contamination procedures are critical to protecting the health of workers and maintaining areas as 'free as practicable' from surface contamination. 309 MXW Break Room Checklist; 309 MXW Change and Shower Room Checklist; and 309 MXW Regulated and Transition Area Checklist are approved workplace housekeeping checklists and are available at the following SharePoint Site

<https://org.eis.afmc.af.mil/sites/309MXW/OSHA/ESAT%20Tools/Forms/AllItems.aspx?RootFolder=%2fsites%2f309MXW%2fOSHA%2fESAT%20Tools%2fCleaning%5fHouseKeeping%20Plans&FolderCTID=&View=%7b16B0ACA8%2dFC47%2d4E78%2d88C1%2d2E5438729B3D%7d>. These checklists are mandatory and will be used daily, or everyday these areas are in operation/used.

17.1. (Added) The requirements of this chapter apply to all service contracts above the Simplified Acquisition Threshold established within the 309 MXW by any group or staff office.

17.3. (Added) The 309 MXW PMO is the 309 MXW Contract Management office (CMO). The CMO will assure planning, acquisition, oversight and management of contractor's performance for Performance Based Service Acquisitions. The CMO will consist of a full time, dedicated staff to oversee and manage performance-based activities within the maintenance wing. The staff, as a minimum, will consist of a chief CMO, program manager, analysts, contract managers (CMs), CM section chief, QAEs and chief QAE. Due to the volume of acquisitions processed by the CMO, the Administrative Contracting Officer (ACO)/Procurement Contracting Officer (PCO) function will remain in the OO-ALC Contracting Office (OO-ALC/PK). However, a contracting officer will also be a member of the CMO staff to advise and assist with contract development, management to create a comprehensive team focused on administration and management of the contracted operations. The majority of QAEs shall remain within the groups to retain the level of expertise close to the customer. When more than one group utilizes a service contract, the group which established the contract will be responsible for overseeing and managing the contract until a wing-level contract can be established.

17.3.6.2. (Added) Unless otherwise delegated, the functional commander or functional director (FC/FD) will be the group commander/deputy of the group contracting for the service. The FC/FD, in conjunction with the CMO, shall ensure all functional reviews and acquisition documents are accomplished prior to submitting the requirements package to contracting.

17.3.6.2.2. (Added) Performance planning, assessment, results, analysis, reporting, follow-up and closure will be accomplished using a variety of tools as explained within the wing Performance Management Assessment Program (PMAP).

17.3.6.2.7. (Added) The CMO database will collect and provide reports from data input from the functional experts within the CMO and the multi functional team. The database will provide an avenue to determine when assessments and reports are due and have the capability to tailor reports to meet FC/FD needs.

17.3.6.2.12. (Added) Monthly surveillance schedules will be submitted to the FC/FD by the QAE.

17.3.6.4.1. (Added) Training is tracked in the CMO database and by the 309 MXW Quality Assurance Program Coordinator (309 MXW/QAPC).

17.3.6.4.2. (Added) For all service contracts, groups will submit a Requirement Initiation Form (RIF) to their group cell in the CMO. This will be used as a data gathering tool for any new requirements for contracted action or exercising of options for existing contracts. The RIF can be obtained from the CMO or the 309MXW Service Acquisitions and Oversight CoP. The CMO will, when required, prepare Contract Support Services Requirement Approval documents IAW AFMCI 63-403, *Contract Support Services (CSS) Requirements Approval Process*.

17.3.6.4.13. (Added) 309 AMARG/QAE will notify FC/FD, chief QAE, CM, PM and ACO and PCO of problems. CM, PM and QAE will work with ACO/PCO to resolve problems.

17.3.6.4.20. (Added) For wing-level contracts, monthly surveillance schedules will be submitted to the FC/FD and chief QAE by the QAE. For group-level contracts, monthly surveillance schedules will be submitted to the FC/FD by the QAE.

17.3.6.4.22. (Added) The monthly surveillance summary report format can be found on the 309 MXW Service Acquisitions and Oversight CoP.

17.3.6.5.1.4. (Added) FC/FD will determine fill requirements. Full-time QAE positions will be filled IAW approved personnel processes.

17.3.6.5.1.7. (Added) The QAE will develop and publish this schedule.

17.3.6.5.1.10. (Added) PMAP guidelines and format can be found in the 309 MXW Service Acquisitions and Oversight CoP.

17.3.6.5.1.12. (Added) Any contractor developed publication will be routed through the wing level SME prior to acceptance and publication.

17.3.6.5.1.15. (Added) The wing chief QAE will coordinate with the QAPC to update QAE training as needed.

17.3.6.6.1.8. (Added) Findings will be coordinated on by the CMO, 309 MXW Commander/Director and OO-ALC Commander, if applicable, prior to forwarding to MAJCOM.

17.3.6.7.2. (Added) The CM and PM will complete the Phase I training available through the QAPC until MAJCOM QAE training is available.

17.3.6.7.3. (Added) The CM and PM will also complete the Phase II training provided by the contract administrator or PCO.

17.3.6.8. (Added) QAE training will be recorded in the Chief QAE's training files.

17.3.6.9.1. (Added) The FC/FD will complete the FC/FD training available through the QAPC until MAJCOM FC/FD training is available.

17.3.6.11.3. (Added) The CMO will provide PMAP examples on the 309 MXW Service Acquisitions and Oversight CoP for groups to utilize.

17.3.6.13.1.4. (Added) The QAE will maintain a copy of the contractor's QC/QA program plan to be utilized as a reference.

17.3.6.13.2. (Added) The QAE will maintain a copy of the contractor's QC/QA program plan to be utilized as a reference.

17.3.6.13.3. (Added) The minimum monthly observation area inspections will be one twelfth of contractual responsibilities e.g., contractor shall/will statements in the PBWS not listed in the services summary.

17.3.8. (Added) Discrepancy forms are included in the PMAP , located in the 309 MXW Service Acquisitions and Oversight CoP.

17.3.9.1. (Added) The QAE will submit this monthly summary to the FC/FD, CM, PM and the ACO/PCO. The PMAP, located on the 309 MXW Service Acquisitions and Oversight CoP, contains a sample form for groups to utilize.

17.3.10. (Added) The PMAP, located on the 309 MXW Service Acquisitions and Oversight CoP, contains a sample form for groups to utilize.

17.3.11. (Added) The CMO CM or equivalent individual responsible for program, project, or task/job/delivery order execution is responsible for initiating and completing an annual Contractor Performance Assessment Report (CPAR) for any contract or delivery order meeting

the CPAR requirement threshold. Additional guidance can be found at <https://cpars.navy.mil>. Contact the CMO for CPARS access.

17.3.12. (Added) Responsibilities, the organization receiving services will be responsible for assigning inspection and acceptance responsibilities, for their group level contracts, within wide area work flow (WAWF) at the WAWF web site <https://wawf.eb.mil/>.

18.15. (Added) 309 AMXG Aircraft Planning: This instruction provides chronological milestones and associated links to established regulations containing the detailed operational planning guidance and instructions necessary to effect the timely identification, development, and control of WCDs and resources required to support funded workloads.

18.15.1. (Added) 309 AMXG Workload Supportability Section (OO-ALC/MABCWW) Long Range Planner:

18.15.1.1. (Added) Accomplishes preplanning for future workload, participates in and coordinates on new workload negotiations through letters, memos, telephone, or fax, and maintains continuous communication and coordination with the appropriate System Program Offices (SPO). The frequency of this communication depends on the weapons system project being planned. (Ref AFMCI 21-133, *Depot Maintenance Management for Aircraft Repair*.)

18.15.1.2. (Added) Attends all weapons system workload conferences called by the SPO, Maintenance Requirements Review Board (MRRB), modification reviews, local meetings, and conferences pertaining to long-range workload plans and schedules. Keeps the upper planning management informed of the progress of the new workload. The frequency of these conferences and meetings depends on the weapons system project being planned.

18.15.1.3. (Added) Provides planning input based on system manager's request as it pertains to the incorporation of weapons system workload into depot maintenance.

18.15.1.4. (Added) Continues the communication or coordination for information gathering with the SPOs and attends workload conferences and MRRBs to ensure all additions, deletions, and changes are identified for the weapon system being planned.

18.15.1.5. (Added) Accomplishes a final review of all production work requirements; i.e., facilities, tools, equipment, skills, training, ground handling, and mockup requirements. Identifies to the program manager those production requirements that are insufficient or are not available to support the new workload. The program manager will take the appropriate action to provide funds. This information will also be passed to the appropriate aircraft planning sections for additional support; i.e., training section for training, engineering section for tools, facilities, and technical data, and support shops for test equipment. Initiates the development of the long-range detailed plan.

18.15.1.6. (Added) Keeps minutes, all records and taskings, and passes information received through meetings to the planning supervisors and the other planners to begin development of the production WCD package.

18.15.2. (Added) 309 AMXG Pre-production Planning Team (PPPT):

18.15.2.1. (Added) Provides the development of the detailed plan to ensure sufficient information for program induction.

18.15.2.2. (Added) The planner is the chairperson and makes assignments to other team members, as necessary.

18.15.2.3. (Added) Reviews statement of work (SOW) and project directives with the team to determine if any additional team members are needed.

18.15.2.4. (Added) Identifies material requirements, availability of additional current material items, new material requirements, and modification kits. This information will be given to the bills of material planner who will plan the material requirements IAW AFMCI 21-130, *Equipment Maintenance Material Control*.

18.15.2.5. (Added) Reviews technical data, drawings, TOs, TCTOs, and manufacturer's specifications for updates/changes.

18.15.2.6. (Added) Evaluates the need for new or additional certification training with production supervisor. If training requirements are needed, they will be identified to the training element.

18.15.2.7. (Added) During the initial review of the new workload, if the PPPT sees a need for special quality or safety requirements the team will call in the quality safety office 309 MXW/QPE, for their expertise to ensure a safe, quality product is produced for the user.

18.15.2.8. (Added) During the initial review of the new workload, if the PPPT sees a need for safety intervention, the team will contact the 309 MXW Safety Office (309 MXW/QPE) for their expertise.

18.15.3. (Added) 309 AMXG F-16 Edit Process: The Edit program enables qualified OO-ALC/MAB planners to edit vendor-engineering data into organized sets of modification drawings for production personnel. The intent of the program is to minimize the time required by production personnel to interpret vendor drawings for installation of depot-level TCTOs. The EDIT program involves:

18.15.3.1. (Added) Eliminating extraneous data by removing pages, views, and notes not related to the work being performed.

18.15.3.2. (Added) Clarifying confusing views and terms and organizing concurrent TCTOs sharing the same location to avoid repetitive steps.

18.15.3.3. (Added) Providing additional notes and views to coincide with cyber operations.

18.15.3.4. (Added) Establishing a management system to monitor engineering change notices (ECN) and other related activities.

18.15.3.5. (Added) Enhancing depot production effectiveness and improving the quality of work being performed on the aircraft.

18.15.3.6. (Added) Establishing and maintaining a management system to monitor and distribute electronic *Request for Changes to Aircraft Work Requirements* and *Negotiated Routed Item List*, to the appropriate personnel.

18.15.4. (Added) 309 AMXG Responsibilities:

18.15.4.1. (Added) The F-16 Aircraft Branch (573 AMXS) F-16 WSSC chief will review and approve requests for additional manpower or industrial fund dollars needed to support projects and/or requirements that are assigned to the EDIT Program.

18.15.4.2. (Added) WSSC will monitor the suspense dates of projects undertaken by the EDIT Program and provide direction, if required.

18.15.4.3. (Added) 309 AMXG Section chiefs in F-16 Aircraft Branch and F-16 WSSC branch will:

18.15.4.3.1. (Added) Determine manpower and logistical requirements needed to support the EDIT Program.

18.15.4.3.2. (Added) Coordinate with offices assigned to the F-16 Management Division (OO-ALC/YPV) to ensure vendor obligations are achieved.

18.15.4.3.3. (Added) Ensure planners assigned to the EDIT Program are properly trained in their assigned workloads and are following all established procedures for that workload.

18.15.4.3.4. (Added) Periodically review program procedures and planner performance to optimize total group integrity. Select planners based on their occupational code proficiency, methodical competence, and overall professional qualities.

18.15.4.4. (Added) 309 AMXG EDIT planners will:

18.15.4.4.1. (Added) F-16 Planning, edit section, develops in-house wiring diagrams and structural drawings to assist the technician in researching electrical and structural TCTO requirements. These wiring diagrams and structural drawings are developed from the TCTO, and TCTO release data from LM-Aero prior to and during kit proof.

18.15.4.4.2. (Added) Be actively involved in an on-going training program with other technicians to continually upgrade their technical skills related to creating 309 MXW/AMXG engineering drawings.

18.15.4.4.3. (Added) Be familiar with and follow all standardized procedures and checklists established for the EDIT Program.

18.15.4.4.4. (Added) Make every effort to ensure the accuracy of the 309 MXW/AMXG drawings, and ensure that they maintain the intent of the TCTO before the drawings are proofed and released to the production floor.

18.15.4.5. (Added) 309 AMXG monitor the Lockheed Martin Aeronautical System (LM-AERO) ECN database to track released engineering changes. Ensures applicable changes are incorporated into the 309 MXW/AMXG engineering drawings as directed by the F-16 SPO through TCTO.

18.15.4.6. (Added) 309 AMXG EDIT Procedures: No relevant vendor engineering data will be altered or deleted when transferred to 309 AMXG engineering drawings.

18.15.4.6.1. (Added) Upon completion of TCTO kit proof, all TCTO changes as well as 309 AMXG hot sheet changes are incorporated into the wiring diagrams. A final wiring diagram is developed and released to the technicians. The 309 MXW/AMXG technicians can initiate organic improvements to the wiring diagrams using the 309 MXW/AMXG Automated 390 System.

18.15.4.6.2. (Added) Changes to wiring diagrams are accomplished, printed, tracked, documented, and controlled by F-16 planning. A change letter is submitted to the aircraft production foreman the last week of the month. The foreman is responsible to print and

distribute the change letter to all technicians on his crew that have a MOD book. All pages that have been changed will be reproduced and distributed to the production foreman by F-16 planning during the last week of the month; the production foreman will then distribute the changes to his crew. All technicians possessing a MOD book are responsible to update their book with the change pages no later than the end of the first week of the new month. The newest change letter will be posted in the front of the MOD book.

18.15.4.6.3. (Added) The MOD books are assigned to the appropriate technicians by the production foreman. The production foreman is responsible to acquire new books for newly assigned personnel, and to collect books from persons processing out of the RCC. F-16 planning is responsible for configuration control of the MOD books.

18.15.4.7. (Added) 309 AMXG transparent overlays may be used to highlight specific views or data.

18.15.4.7.1. (Added) Photographs or videos may be used where dimensions are not required.

18.15.4.7.2. (Added) Master copies of 309 MXW/AMXG engineering drawings will be maintained for, the life of the MOD they were developed for, future reference by the EDIT technician, or designee, who originally produced the drawing.

18.15.4.7.3. (Added) The assigned system planning monitor will receive, record, and deliver all incoming forms to the responsible planner for update.

18.15.4.7.4. (Added) 309 MXW/AMXG engineering drawings are created for 309 MXW/AMXG use only and are not to be released to other organizations unless prior approval has been obtained from ALC/MAB. Stress the security issue, especially competitors and foreign countries.

18.15.4.8. (Added) 309 AMXG Master Scheduler (309 MXW/AMXG).

18.15.4.8.1. (Added) Will coordinate with program manager (system manager) to ensure the funding is in place for the new workload to establish PCN IAW AFMCI 65-101, *Depot Maintenance Accounting and Production System-Financial Policy And Procedures For Organic Depot Maintenance*.

18.15.4.8.2. (Added) Will coordinate with planning and production supervisors on manpower requirements by skill for the new workload.

18.15.4.8.3. (Added) Will receive and send price and availability (P&A) information to the appropriate workload supportability section and program manager.

18.15.4.9. (Added) 309 AMXG Process Control and Improvement Branch (309 AMXG/ENF):

18.15.4.9.1. (Added) Will evaluate special tool requirements to determine if any new or special tools are required for the new workload. 309 AMXG/ENF will purchase any new tools through base purchasing procedures. After new tools have been acquired, the responsibility of maintaining and purchasing additional tools is turned over to the tool crib in production support section (309 AMXG/ENF).

18.15.4.9.2. (Added) Will evaluate test equipment (mock-up) requirements using the technical data provided for the new workload. Will also determine if current test equipment is sufficient to handle the new workload or initiate purchase, if additional or new test equipment is required.

18.15.4.9.3. (Added) Will evaluate work stand requirements using technical data provided and current work stand configuration being used for workloads transferred from another depot. Will also determine if additional, new, or a redesign of current stands is required. If any of the above is required, will take whatever action is required (purchase additional, new, or redesign current) to ensure the stands are available at the time workload is implemented.

18.15.4.9.4. (Added) Will evaluate aircraft forms dead file facilities for any additional space that may be required.

18.15.4.9.5. (Added) Will evaluate technical data for new workload for ground support and production support equipment. Will determine if any new or additional requirements to support new workload are needed and initiate purchase.

18.15.4.10. (Added) 309 AMXG Production Supervisor:

18.15.4.10.1. (Added) Will be the production representative for assigning the PAC codes and applicable safety codes applied to the WCDs. The production supervisor will evaluate work requirement operation as to context, PAC codes, and safety requirements.

18.15.4.10.2. (Added) Will notify the Environmental and Safety Compliance Assurance Branch of any special safety requirements for processing of new workload through production.

18.15.4.10.3. (Added) 309 AMXG Production support will evaluate facility requirements to determine whether or not existing facilities are adequate for the proposed workload. Facility engineering will follow base procurement procedures to develop new facilities or modify existing facilities.

18.15.5. (Added) 309 AMXG Planners:

18.15.5.1. (Added) The lead planner will determine work requirements by type of work skills and distribute to the planners; i.e., stripping/paint, sheet metal, electronic check out, electrical, flight test, back shops (support shops), and aircraft general and attend the MRRB.

18.15.5.2. (Added) The lead planner will bring all the required planners together to combine each of the skills tasks (operations) for a total duration, manpower, and critical path production WCD package project workload planning.

18.15.5.3. (Added) The lead planner will attend all weapons system workload conferences called by the system programmer, MRRBs, modification reviews, local meetings, and conferences pertaining to long-range workload plans and schedules. The frequency of these conferences and meetings depends on the weapons system project being planned.

18.15.5.4. (Added) The lead planner will analyze technical data; e.g., drawings, TOs, TCTOs, letters, messages, and manufacturer's specifications. These will be used to develop descriptions of tasks.

18.15.5.5. (Added) Each planner will complete his/her portion of the WCD package and determine requirements for each operational task by reviewing manpower according to RCC, tools, equipment, ground handling, mock-up, and facilities. Each detail planner will use job guides, drawings, TOs, TCTOs, and manufacturer's specifications to develop each operational task.

18.15.5.6. (Added) Each detail planner will establish and assign labor standards to unpredictable WCDs (reference AFMCI 21-105, *Depot Maintenance Work Measurement*). If

material is required, will establish the material standard and enter the codes on the unpredictable WCDs (reference AFMCI 21-156, *Operational Work loading, Planning, and Scheduling Control*).

18.15.5.7. (Added) Each detail planner will work with the supervisor and ALS to review and disposition all unplanned work operations, including any required follow-on maintenance and technical data references that are input by the initiator.

18.15.5.8. (Added) Each planner will estimate duration (time/hours), sequence, critical path, and manpower to accomplish this for each operational task for each skill (reference AFMCI 21-105).

18.15.5.9. (Added) Detail Planners will load each specific task (operation description) into the computer system with labor standards, material requirement code, routed items, tools, work facilities, equipment (stands), ground equipment (hydraulic, electrical, air), PAC codes, TOs, etc.

18.15.5.10. (Added) Planners will maintain WCDs by continually monitoring and reviewing all applicable TO changes, supplements, and drawing changes. This will be accomplished through coordination meetings with the detail planners and production personnel as required. At a minimum they will address the following; TO changes, deficiency reporting, engineering changes and TCTO changes.

18.15.5.11. (Added) Planners will respond to all hard copy and electronic forms, analyze the request, determine appropriate action, and provide feedback to the initiator via electronic mail, telephone, or personal visit.

18.15.5.12. (Added) Planners will provide continuous improvement of processes and procedures for the WCDs.

18.15.6. (Added) 309 AMXG P&A:

18.15.6.1. (Added) Planning will do an initial review of the P&A task. The initial review is to determine if the requester has provided sufficient data to develop a P&A statement. Planning will schedule the initial P&A team meeting and will determine who should attend.

18.15.6.2. (Added) The purpose of the initial team meeting is to select a team leader, review the data received, define the tasking, set a suspense date, and determine which maintenance sections will be involved in the P&A development procedure.

18.15.6.3. (Added) At the initial P&A team meeting, the team will use the requirement data list and their applicable directives to develop the P&A statement. This list is not all-inclusive and, as the team discusses the tasking, other requirements could develop and be considered.

18.15.6.4. (Added) Each section; i.e., planning, engineering, work loading, etc., will review the requirements data list for data elements relating to their area of responsibility. Examples of items to be reviewed are skills, man-hours, facilities, effect on current workload, flow time, storage, etc. Each of these items must be analyzed. When all data pertaining to a section's area of responsibility has been reviewed, the information is presented at the next team meeting.

18.15.6.5. (Added) The P&A team lead will schedule additional meetings as needed to complete the P&A request by the suspense date set in the initial meeting. The team lead will coordinate the time and place for these meetings.

18.15.7. (Added) 309 AMXG Prime Planning:

18.15.7.1. (Added) After receiving funded workload from work loading, the appropriate weapon system prime planner will:

18.15.7.1.1. (Added) Ensure funding for all requirements is in line and matches the project directive.

18.15.7.1.2. (Added) Validate the aircraft input schedule from the program manager prior to induction. Submit aircraft data; i.e., PCN, serial number (S/N), and Job Order Number (JON) into the G097 system. Whenever possible, this will be done at least 30 days before aircraft arrival. When action is taken by work loading to input aircraft data into G004L system, it will induct the aircraft.

18.15.7.1.3. (Added) Upon receipt of AFTO Form 103, *Aircraft/Missile Condition Data*, request from the program manager, review the AFTO Form 103 request and coordinate with the appropriate weapon system master scheduler, work loader, engineer, and production personnel for their support on any AFTO Form 103 items in their specific area of responsibility. Standard items are as follows:

18.15.7.1.3.1. (Added) Special material (aircraft material planner).

18.15.7.1.3.2. (Added) Special tooling and facilities.

18.15.7.1.3.3. (Added) Manpower and time constraints (aircraft work loading).

18.15.7.1.3.4. (Added) Capability (appropriate production section).

18.15.7.1.3.5. (Added) Repair procedures.

18.15.7.1.3.6. (Added) Funding allocation (work loader).

18.15.7.1.3.7. (Added) Capacity (master scheduler).

18.15.7.1.3.8. (Added) NAVAIR requirements (Navy).

18.15.7.1.4. (Added) Contact the program manager and identify the non-supportable items on the AFTO Form 103 request.

18.15.7.1.5. (Added) Provide a copy of supportable AFTO Form 103 request to the records section PAO, and to the customer support section noting those AFTO Form 103 items that will require AFTO Form 781, series forms, entries.

18.15.7.1.6. (Added) Provide copies to PAO, production and ALS, work loading, and the Defense Contract Management Agency, instead of PAO, if contract workload.

18.15.7.1.7. (Added) Prime planning will notify the records section and PAO to initiate appropriate entries for each individual AFTO Form 103 request item on MWR.

18.15.7.1.8. (Added) MWR entries will be identified as either an AFTO Form 781A, entry (to be accomplished) or an AFTO Form 781K, *Aerospace Vehicle Inspection, Engine Date, Calendar inspection and Delayed Discrepancy Document*, entry (to be carried back to the activity) and will provide proper tracking and corrective action, (reference TO 00-20-2, *Maintenance Data Documentation, Section III*).

18.15.7.1.9. (Added) Planning will review and address all AFTO Forms 103 requests at each MRT meeting (incoming, transfer and post) to ensure each request is complied with or transferred.

18.15.7.1.10. (Added) Develop a tailored work package for each aircraft as directed by the system manager using the SOW, MRRB, AFTO Form 103, and PDM for all known work requirements. This is done in preparation for issue to the scheduler for production. Work decks should be available to production 7 days prior to aircraft arrival.

18.15.7.1.11. (Added) If TCTO or technical directive (TD) is to be accomplished, enter the TCTO or TD data in the TO Header. If TCTO or TD is issued after this list has been produced by the G097E system, then the TCTO or TD data (TCTO or TD number, nomenclature, and date) will be added to the TO header, and given to the production ALS.

18.15.7.1.12. (Added) If possible, initiate a planning letter 14 days prior to scheduled aircraft arrival. The planning letter will contain all aircraft information, model, tail number, TCTOs, AFTO Form 103 requirements, and any other special requirements needed to be complied with while the aircraft is in work. The planning letter is available to all aircraft branches in (OO-ALC/MAB) organizations through the PDMSS.

18.15.7.1.13. (Added) Provide immediate coordination of all changes to magnitude and scope of work with the appropriate production area, scheduling unit, and records unit.

18.15.7.1.14. (Added) Assist in determining work categories and coding of work to be accomplished.

18.15.7.1.16. (Added) Be the final authority on coding of work.

18.15.7.1.17. (Added) Chair incoming MRT meeting to be held within 30 days after the arrival of the aircraft. This meeting will determine any additional work to be accomplished.

18.15.7.1.18. (Added) Ensure all documents are available for review during Incoming MRT.

18.15.7.1.19. (Added) Receive immediate/urgent action TCTOs and TDs by e-mail and determine where TOs are to be accomplished and distribute them to the pertinent organizations by e-mail with receipt indicator set or hand carry. It is the planner's responsibility to ensure all pertinent organizations have received the TO notices.

18.15.7.1.20. (Added) Develop a fixed price work package for each PDM aircraft and mail to the appropriate personnel.

18.15.8. (Added) 309 AMXG Production Line ALS:

18.15.8.1. (Added) Will work with the planner to build all unplanned work operations, including any required follow-on maintenance and technical data references.

18.15.8.2. (Added) Will enter the TCTO or TD data on the MWR and input into PDMSS that will produce a WCD. The production mechanic will use the WCDs to accomplish the TCTO or TD tasking.

18.15.8.3. (Added) Will verify that the immediate/urgent action TCTO or TD is stamped by the production line supervisor/mechanic.

18.15.8.4. (Added) Will generate MWR number for AFMC Form 202, , and input the MWR number on the corresponding AFMC Form 202.

18.15.8.5. (Added) Will input the MWR number on the AFMC Form 202.

18.15.8.6. (Added) Will open the Alexandria Handbook, click on the "work" icon, and double click on the DESTRAP F-16 AFMC Form 202 link.

18.15.8.6.1. (Added) This opens the DESTRAP Web site.

18.15.8.6.2. (Added) Click on the management Log in.

18.15.8.6.3. (Added) First-time users create a new account. To create a new account, enter personal information (red arrows indicate required fields), and click “continue”.

18.15.8.6.4. (Added) Returning users sign into the F-16 structural repair site by entering their e-mail address and password.

18.15.8.6.5. (Added) Verify personal information and click “continue”.

18.15.8.6.6. (Added) Click on multi-search.

18.15.8.6.7. (Added) Scroll down to aircraft S/N and enter aircraft serial number. Hit enter.

18.15.8.6.8. (Added) Choose control number to be edited.

18.15.8.6.9. (Added) Scroll down to Part “A” of the AFMC Form 202 and locate edit MWR.

18.15.8.6.10. (Added) Scroll to MWR Block and enter MWR or operation number then click update.

18.15.9. (Added) 309 AMXG Preparation for Flight ALS:

18.15.9.1. (Added) Will work with the planner to build all unplanned work operations, including any required follow-on maintenance and technical data references.

18.15.9.2. (Added) If a TCTO or TD is to be performed by flight test on an aircraft that is in the production phase, will submit an MWR for that TCTO or TD so the MWR may be an open MWR during the transfer process. All open MWRs become entries in the AFTO Form 781A. The MWR will then be printed by the appropriate scheduler in Flight Test. The TO header will be transferred to flight test during the Transfer meeting as information only.

18.15.9.3. (Added) Will, upon receipt of the TCTO or TD message and WCDs, give them to the flight test production supervisor for accomplishment of the TCTO or TD tasking.

18.15.9.4. (Added) Will verify that the immediate/urgent action TCTO or TD header is stamped by the flight test production supervisor/mechanic within the suspense date.

18.15.9.5. (Added) After aircraft completion, will fill out AF Form 781A with all TCTO or TD information (TCTO or TD number, nomenclature and date). Send completed AFTO Forms 781A to the records office PAO for update of historical aircraft records.

18.15.10. (Added) 309 AMXG Production Line and Prep for Flight Supervisors:

18.15.10.1. (Added) Will see that the TCTO or TD tasking as described in the TCTO or TD message or WCDs are complied with.

18.15.10.2. (Added) For AF aircraft when TCTO tasking is complete, will code CW (complied with), PCW (previously complied with), or NA (not applicable), and P-Stamp and date the TO header (production line) or AFTO Form 781A (Flight Test) (reference TO 00-20-1 Section III). Will give the completed TCTO documentation and TO header to production and flight test ALS.

18.15.10.3. (Added) For Navy aircraft, when TD tasking is complete, will code the TO header or AFTO Form 781 CW, PCW, or NA (reference TO 00-20-1, Section III). Will give the completed TD documentation and TO header to production and Flight Test ALS.

18.15.11. (Added) 309 AMXG Master ALS or Resources Management Branch after receiving MAR-107, *Maintenance Assistance Request*, from System Program Manager will:

18.15.11.1. (Added) Evaluate for the type of assistance, field team, O&I, emergency maintenance, depot maintenance, and response time to request. Refer to planning for P&A evaluation.

18.15.11.2. (Added) Take into account geographic considerations; i.e., facility available at place of work performed, time constraints at the area of work performed, etc.

18.15.12. (Added) 309 AMXG Depot Field Teams:

18.15.12.1. (Added) Depot field team planners will:

18.15.12.1.1. (Added) Prepare a TCTO data sheet reflecting information available prior to field team deployment; e.g., aircraft models, aircraft serial numbers, TCTO numbers, TCTO data codes, man-hours, and field location where work is to be accomplished.

18.15.12.1.2. (Added) Provide the completion data to the records office for update to the REMIS.

18.15.12.2. (Added) Depot field team leader will document specific aircraft information, work completions on the TCTO data sheet at the field site, and periodically provide completion data to the depot field team planner via fax or telephone.

18.15.12.3. (Added) Forms and records unit PAO will prepare AFTO Forms 95, for each aircraft, reflecting the work or TCTOs to be accomplished. At the field site, the AFTO Forms 95 will be completed by the field team leader with specific aircraft hours, date the work was accomplished, and the team leader's signature. The completed AFTO Forms 95 will be given to the owning activity's documentation section to become a part of the permanent aircraft records.

18.15.13. (Added) 309 AMXG Workload Planner And Planner:

18.15.13.1. (Added) Will process AFMC Form 206 IAW AFMCI 21-120 and forward the AFMC Form 206 to planning.

18.15.13.2. (Added) The workload planner will apply the total hours required to perform the P&A task to a cost analysis to complete the development of the P&A statement.

18.15.13.3. (Added) The workload planner will notify the requesting customer of the P&A results.

18.15.13.4. (Added) The planner will plan the AFMC Form 206, IAW AFMCI 21-120.

18.15.13.5. (Added) The planner will receive and process all MWRs within 4 hours of receipt. Processing includes verification of accuracy of all information on MWR, appropriateness of data, and approval or disapproval of request.

18.15.14. (Added) 309 AMXG MRT and JON Closure:

18.15.14.1. (Added) The 309 AMXG PAO will:

18.15.14.1.1. (Added) Assist MRT in the determination of work of incoming defects over and above, (over and above [O&A] low frequency predictables and incoming AFTO Form 781 items).

18.15.14.1.2. (Added) Ensure funding is available for any defects determined to be over and above during the Incoming MRT.

18.15.14.1.3. (Added) Assist in ensuring funding for O&A materials and labor has been credited to the correct JON during the final MRT and JON close-out process.

18.15.14.1.4. (Added) Assist work loading unit in preparation for final JON closure.

18.15.14.2. (Added) 309 AMXG Lead ALS will:

18.15.14.2.1. (Added) Assist the RCC scheduler in preparing for the incoming MRT.

18.15.14.2.2. (Added) In conjunction with RCC first-level supervisor, the RCC first-level sheet metal supervisor, ALS, and E&I review NDI/E&I incoming inspection defects prior to incoming MRT.

18.15.14.2.3. (Added) Ensure all MRT members are present and all forms are available for the MRT members to review during incoming MRT.

18.15.14.3. (Added) Material supportability section supply specialist attends incoming MRT to address questions on availability of kits and materials for MODs and special projects.

NOTE: (Added) OO-ALC/LG representative provides transfer or final MRT with documentation showing that all material actions have been cleared (see AFMC Attachment 4, Quarterly FCC Report Format).

18.15.14.4. (Added) 309 AMXG Production ALS will:

18.15.14.4.1. (Added) Assist in the evaluation and documentation of the E&I/NDI incoming inspection prior to Incoming MRT.

18.15.14.4.2. (Added) Ensure all documents are available for review during incoming MRT.

18.15.14.4.3. (Added) Ensure work to be accomplished on the aircraft is entered in the appropriate WCDs, and that all work documents are coded correctly.

18.15.14.4.4. (Added) Ensure all MRT members are present and all forms and records are available for the members of the MRT to review.

18.15.14.4.5. (Added) Ensure all work to date has been accomplished and entered into PDMSS.

18.15.14.4.6. (Added) Ensure all carried forward items are properly entered in the AFTO Form 781K.

18.15.14.5. (Added) 309 AMXG RCC first-level supervisor and RCC first-level sheet metal supervisor will:

18.15.14.5.1. (Added) Assist in the documentation of the E&I/NDI incoming inspection prior to incoming MRT, if required.

18.15.14.5.2. (Added) Review all available aircraft records during the incoming MRT to ensure a complete understanding of type and category of work to be performed on the aircraft.

18.15.14.5.3. (Added) Assist in the coding of work documents, if required.

18.15.14.5.4. (Added) Ensure all work has been accomplished and entered into PDMSS prior to the transfer MRT.

18.15.14.5.5. (Added) Attend transfer MRT to assist in closing maintenance facility portion of aircraft records and forms.

18.15.14.6. (Added) The prep for flight representative will attend Incoming MRT to ensure prep for flight concerns as to coding of work documents and AFTO Form 781 items are addressed.

18.15.14.7. (Added) 309 AMXG Prep for Flight ALS will:

18.15.14.7.1. (Added) Attend transfer MRT to ensure maintenance facility has accomplished and documented all required work and all forms and records are correct and complete prior to aircraft being released to flight test.

18.15.14.7.2. (Added) Ensure all work has been accomplished and all forms, records, and work documents are complete, signed off, and entered into the appropriate data system prior to JON closure.

18.15.14.8. (Added) 309 AMXG Prep for Flight first-level supervisor will:

18.15.14.8.1. (Added) Attend transfer MRT to ensure work has been accomplished and all forms and records are correct and complete prior to aircraft being transferred to flight test.

18.15.14.8.2. (Added) Review all carry forward actions for correct coding and applicability.

18.15.14.9. (Added) Back Shop ALS will attend MRT at the request of the MRT chairperson.

18.15.14.10. (Added) Paint ALS will attend MRT at the request of the MRT chairperson.

18.15.14.11. (Added) 309 AMXG work loader will:

18.15.14.11.1. (Added) Attend all MRT meetings to ensure funding issues are correct and documented correctly.

18.15.14.11.2. (Added) Ensure all funding issues are addressed and corrected as needed.

18.15.14.11.3. (Added) Monitor MRT functions to ensure all funding issues are being addressed and that the intent of MRT is being complied with.

18.15.14.12. (Added) 309 AMXG Forms and Records Unit PAO will:

18.15.14.12.1. (Added) Provide all aircraft records for MRT.

18.15.14.12.2. (Added) Ensure forms and records are complete and accurate at time of MRT.

18.15.14.12.3. (Added) Ensure all entrees made during MRT are complete and accurate.

18.15.15. (Added) 309 AMXG AFMC Form 202:

18.15.15.1. (Added) A request for engineering assistance for a nonconforming technical problem can be identified by a mechanic and initiated by the supervisor.

18.15.15.2. (Added) The initiator opens the Alexandria Handbook, clicks on the “work” icon, and double clicks on the DESTRAP F-16 AFMC Form 202 link. This opens the DESTRAP web site.

18.15.15.2.1. (Added) Click on the Field Member Log in.

18.15.15.2.2. (Added) First-time users need to create a new account. To create a new account enter personal information (red arrows indicate required fields). Click on “continue”.

18.15.15.2.3. (Added) Returning users sign into the F-16 structural repair sight by entering their e-mail address and password.

18.15.15.2.4. (Added) Verify personal information and click “continue.”

18.15.15.2.5. (Added) Click on the “submit a new 202” link.

18.15.15.2.6. (Added) Complete AFTO Form 202 (red arrows indicate fields that are required).

18.15.15.2.7. (Added) All required fields, including the description field, must be complete.

18.15.15.2.8. (Added) 309 AMXG. Click on the “submit 202” link.

18.15.15.2.9. (Added) If the form is filled out correctly, a control number will be assigned and the initiator will be linked to a new page where they can view that control number. If the form is not complete or there are input errors, red text will be seen at the top of the form, which will highlight the errors or missing information.

18.16. (Added) 309 AMXG Control of Predetermined Acceptance Probability (Pap) Switch Settings Within Express. This section describes procedures for adjusting the redetermined acceptance probability PAP setting within the daily Execution and Prioritization of Repair Support System (EXPRESS) used in the fabrication division Y squadron (309 AMXG/MXAY) in the 309 AMXG. This instruction also provides additional information to support AFMC Instructions, and MM-1, *Materiel Managers Operating Instruction*.

18.16.1. (Added) 309 AMXG System Access Required:

18.16.1.1. (Added) IBM compatible PC, 486SX or higher processor, 8 MB RAM, 16-bit graphics capability.

18.16.1.2. (Added) Software access to EXPRESS data tool kit, D087H.

18.16.1.3. (Added) Read/write password access to EXPRESS data tool kit software program.

18.16.2. (Added) 309 AMXG Background:

18.16.2.1. (Added) During normal daily EXPRESS operations, a prioritized list of end items is created for each NSN depicting a unique "prioritized need". Serviceable assets (condition codes A and Z reflected in D035A) and those already in work (awaiting maintenance, on work order, or condition code Y from G402A) are then allocated individually (one-bone) to an identical match on the prioritized list. Allocated assets are individually matched with each prioritized repair need; this process continues until all allocated resources have been assigned. The next prioritized repair item on the list (remaining after allocation) becomes the first potential repair item for a given day's list.

18.16.2.2. (Added) Before any items on the list are approved for repair, several checks (or tests) are made within EXPRESS for each item. These checks ensure items recommended for repair encounter no unforeseen constraints inhibiting the item's repair completion. The sequence of constraint checks followed by the EXPRESS prioritization processor (EPP) includes the following:

18.16.2.2.1. (Added) Carcasses

18.16.2.2.2. (Added) Parts.

18.16.2.2.3. (Added) Capacity management.

18.16.2.2.4. (Added) Funding.

18.16.2.2.5. (Added) It is within the parts management checks that individual PAP settings are made.

18.16.3. (Added) 309 AMXG Procedure for Initiating Changes to PAP settings within express:

18.16.3.1. (Added) 309 AMXG PAP changes may be made to individual NSNs or by shop repair resource code (RRC). Requests to change either or both PAP settings may be initiated by the materiel manager (MM), applicable shop chief, workload manager (WLM), or the SSC chief. The WLM will act as the single point of contact for all requests to adjust PAP settings within EXPRESS.

18.16.3.2. (Added) In the absence of the responsible WLM governing the applicable NSNs within an RRC, an alternate WLM designated by the SSC chief shall act as the POC for all adjustment requests to PAP settings within EXPRESS.

18.16.3.3. (Added) Normally the responsible WLM will be the only person initiating change inputs to PAP settings within EXPRESS. In those instances where the applicable WLM is unavailable on a given day, the alternate WLM designated by the SSC chief shall make all necessary PAP change inputs.

18.16.3.4. (Added) Before any changes are made to individual PAP settings, either for an NSN or an entire RRC, the WLM shall coordinate with the responsible MM, shop chief, and SSC chief. The concurrence of the MM is required before any PAP changes can be made. If the MM and the WLM cannot concur on the change, then the issue will be taken to the Depot Repair Enhancement Program (DREP) meeting for arbitration and final decision.

18.16.3.5. (Added) In the absence of the responsible MM, the WLM shall contact the materiel management liaison (MML) if the applicable materiel management directorate has established such a position. The MML shall act for and on behalf of the MM. The MML will inform the applicable MM of any changes made.

18.16.3.6. (Added) The procedures outlined in the preceding paragraphs provide a basic framework for initiating PAP changes; however, ideally, requests for changes to individual NSNs and/or RRC PAP settings will be voiced by the responsible players (MM, WLM, shop chief, or SSC chief), at the weekly "top ten" meetings held by each individual Fixer shop chief.

18.16.3.7. (Added) Other forums exist for requesting changes such as informal DREP or an MM IPT meeting. However, due to uniqueness of the NSNs and RRCs involved, these types of broad-based meetings probably do not suit the purpose and are, therefore, not recommended.

Table 18.16.4. (Added) 309 AMXG Express PAP Switch Positions in the Repair Resource Screen Matrix:

Switch Positions- Repair Resource Screen Matrix -								
Prior Model Indicator	Spty Capacity Switch	Spty K Factor	Spty Max Item Switch	Spty Hours	Spty PAP	Supply SLIMM Switch	Spty Include AWP	Spty Add MICAP
ACFT	ADDITIVE HOURS	X%	EXPRESS	X Hours	X%	ON	ON	ON
EXCLUDE	TOTAL Hrs PIPE	"	AWM PIPE	"	"	OFF	OFF	OFF
EPP ONLY		REPAIR PIPE		"		"		

NOTE: (Added) All settings should be reviewed periodically to ensure shop workload is being effectively managed.

NOTE: (Added) Upon completion of their review of EXPRESS Data Terminal data, repair team members should exit the program to prevent user overload so others may access the EXPRESS database.

18.17. (Added) Responsibilities. This section prescribes responsibilities for implementing new systems, subsystems, major modifications, equipment, landing gear, power systems, hydraulics, and armament for depot activation in the industrial commodities division (309 MXW/CMXG).

18.17.1. (Added) 309 CMXG Responsibilities:

18.17.1.1. (Added) Provides overall program authority, guidance and approval for 309 CMXG depot activation requirements.

18.17.1.2. (Added) Oversees all division branches affected by depot activation requirements.

18.17.1.3. (Added) Interfaces with outside agencies affected by the depot activation.

18.17.1.4. (Added) Reviews, coordinates, and approves program actions within the division.

18.17.1.5. (Added) Ensures the depot activation process flows in a uniform and timely manner.

18.17.1.6. (Added) Notifies MANW of impending source of repair (SOR) decisions for a seamless transfer from OO-ALC/FMP of the Maintenance Activation Planning Team (MAPT) chairperson responsibilities.

18.17.1.7. (Added) 309 CMXG Resource Management Branch, Business Office: Is the OPR for the depot activation inside the 309 CMXG division. 309 CMXG/OB will co-chair the MAPT with a single point of contact for the depot activation after the SOR decision. The single point of contact for the MAPT will interface with all program elements required for depot activation within the specified division.

18.17.2.1. (Added) 309 CMXG/MANWS represents 309 CMXG as the single point of contact for program elements to include:

- 18.17.2.1.1. (Added)** Program Management Reviews (PMR).
- 18.17.2.1.2. (Added)** Integrated Logistic System Management Team.
- 18.17.2.1.3. (Added)** Maintenance Activation Planning Team (Chair).
- 18.17.2.1.4. (Added)** Depot Maintenance Activation Working Group (DMAWG/CO-Chair).
- 18.17.2.1.5. (Added)** Logistics Support Analysis Reviews.
- 18.17.2.1.6. (Added)** Support Equipment Requirement Document reviews.
- 18.17.2.1.7. (Added)** In Process Reviews.
- 18.17.2.1.8. (Added)** System Design reviews.
- 18.17.2.1.9. (Added)** Preliminary Design Reviews.
- 18.17.2.1.10. (Added)** Critical Design Reviews.
- 18.17.2.1.11. (Added)** Technical Order Verification .
- 18.17.2.2. (Added)** Ensures successful transition of local manufacture requirements and identifies duplication of support equipment and or facility requirements. Provides guidance in sourcing table of allowance and calibration requirements.
- 18.17.2.3. (Added)** Helps the responsible program office formulate recommendations for repair, support equipment, technical manuals, personnel requirements, and facility requirements.
- 18.17.2.4. (Added)** Works the problems identified by the MAPT and reports them to the DMAWG on depot activation delays.
- 18.17.2.5. (Added)** Works with scheduling, planning and production to establish a coordinated network analysis for tracking depot activation actions and status.
- 18.17.2.6. (Added)** Provides information on government-furnished resources and specific depot maintenance activation schedules.
- 18.17.2.7. (Added)** Coordinates and briefs on depot maintenance activation planning activities to 309 MXW.
- 18.17.2.8. (Added)** Briefs the 309 MXW on the status of the depot activation progress, problems and schedules.
- 18.17.2.9. (Added)** Initiates, maintains and coordinates with the local engineering community (system, process, facility, civil engineering, etc.) on depot activation activities.
- 18.17.2.10. (Added)** Helps the program office finalize depot maintenance activation plans and briefs the plans to maintenance personnel, 309 MXW, and OO-ALC/CC prior to Milestone III, the Production Decision.
- 18.17.2.11. (Added)** Briefs 309 CMXG, 309 MXW, and OO-ALC/CC when the depot activation is declared officially organic.
- 19.1.2.1. (Added)** 309 MXW technical data extract policy may be found in Chapter 14.47. of this document.
- 19.1.2.3.1. (Added)** 309 AMARG when a specific task, procedure, part removal, or common maintenance practice is not covered by the applicable aircraft TO, the aircraft “system” (i.e.,

pneudraulics, engine, landing gear, structural, etc.), next higher assembly or commodity T. may be used to complete the task. The planner will ensure this is not listed as an “IAW” task on the WCD. If the removal of the part is a complex task, as determined by the Production Planning Team (PPT), an AFMC Form 561, will be developed locally. Use ORM to verify the benefit outweighs the risk when direct aircraft TO guidance is not available. The applicable aircraft -3 structural TO will be used as a reference for reclamation status aircraft structural cuts, along with the applicable -2 removal TO for components located in the cut area.

19.1.2.3.2. (Added) 309 AMARG “reclamation removal work packages,” copies of TO extracts will be IAW TO 00-5-1, and 309 AMARG specific instructions in Chapter 14. Technical data will be reviewed, and the most current version will be used prior to issuing reclamation work control packages to maintenance.

19.1.2.3.3. (Added) To meet requirements for aircraft in storage at 309 AMARG, TO 1-1-686, will be used for procedures and specifications addressed (i.e., landing gear strut extension, aircraft tire pressures, aircraft towing procedures, etc.).

19.1.2.6. (Added) 309 MXW WCD Focal Point Duties and Responsibilities. The WCD focal point will:

19.1.2.6.1. (Added) Be appointed by the 309 MXW Commander, Director, or equivalent.

19.1.2.6.2. (Added) Coordinate with headquarters to provide interpretation and guidance on all WCD issues and processes when not defined in other directives.

19.1.2.6.3. (Added) As required, supplement higher headquarters requirements on the WCD program. WCD focal point is OPR for 309 MXW WCD policy contained within this chapter.

19.1.2.6.4. (Added) Participate in the development of all command and local WCD training courses.

19.1.4.1. (Added) If Mil Standards, Mil Specifications, American Society for Testing Materials, Department of Defense Performance Specifications or similar type of technical information is required; the planner shall ensure this information is current and correct for the workload. Locally reproduced copies of these documents will be controlled as technical data extracts.

19.1.4.1.1. (Added) Any locally developed technical data referenced on a WCD will be in the form of an AFMC Form 561.

19.1.4.2. (Added) 309 CMXG organizations (as shown on the process order information sheet) will keep an electronic version of each process order applicable to the organization in a location convenient to the end user/work station. Note that this will require strategic placement of computer terminals in the work area.

19.1.4.2.1. (Added) Tasks identified beginning with paragraph 19.1.5.8.3.5. will be identified as IAW. Non-IAW tasks (formerly known as reference or REF) tasks may be specified as REF.

19.1.4.2.1 (Added) 309 AMARG when IAW is used on the WCD, do not include paragraphs, pages or card numbers with the TO reference.

19.1.4.2.4. (Added) The WCD header may contain the following statement or equivalent: “All operations identified on this WCD shall be done IAW unless identified otherwise.” Including this statement in the header eliminates the requirement to identify each task description block technical data as IAW (see also paragraph 19.1.5.1.).

19.1.4.4.1. (Added) An AFTO Form 22 will be evaluated by the supervisor or designee and forwarded to the squadron product improvement manager (PIM). The PIM will follow the procedures contained in Chapter 14.46. of this supplement, as well as the procedures identified in TO 00-5-1.

NOTE: (Added) For more information on AFTO Form 22s and other technical data change requests, please see the publication change requests section on the 309 MXW Technical Data Program Office CoP: <https://www.dmy.af.mil/afknprod/ASPs/CoP/OpenCoP.asp?Filter=OO-XP-MC-62>

19.1.4.4.2. (Added) In block 23 of the AFMC Form 202, the weapon system engineer is required to enter either a “rescind on” date when the form is used to authorize “periods of use” not to exceed 120 days or identify the serial number, tail number or AFMC Form 206, *Temporary Work Request*, number associated with the “one time use” against a specific aircraft or item. The planner or designee will check the AFMC Form 202 to ensure that there is only one entry in block 23 either in “A” or “B” *not in both “A” and “B”*. The AFMC Form 202 will not have two entries in block 23.

19.1.4.4.2.1. (Added) Technical data references to AFMC Form 202 must be deleted from active WCDs upon the rescission of the AFMC Form 202. WCDs completed prior to the AFMC Form 202 rescission will not be changed after-the-fact to reflect the rescission.

19.1.4.4.2.2. (Added) AFMC Form 202 follow-up. The planner or designee who initially submitted an AFMC Form 202 will be responsible to do follow-up inquiries when the required need date on the AFMC Form 202 is not met by engineering, and engineering has not informed the shop it cannot meet the required need date in writing. Follow-up e-mail actions will be done no later than 3 working days after the required need date listed on the AFMC Form 202.

19.1.4.4.2.3. (Added) The planner shall maintain a file of the completed AFMC Form 202 in the planning file. This may be done electronically. If the file is maintained manually in the planning file, it will be maintained per [AFRIMS Table 21-05, Rule 02](#).

19.1.4.4.2.4. (Added) 309 AMXG Aircraft Logistics Specialist (ALS) AFMC Form 202 responsibilities see paragraph 19.2.6.10.

19.1.4.4.3.1. (Added) Upon receipt of a completed SH252 with an AFMC Form 202 attached, the changes will be incorporated into the WCD within 15 working days and released to the maintenance activity.

19.1.4.4.5. (Added) Maintenance Assistance to Air Force Bases and Sites. Procedures for processing field-level maintenance assistance requests are located in AFMCI 21-133. Personnel assigned within the 309 MXW Aircraft Maintenance Group (309 AMXG) may use the “-107 process” to request nonconforming technical assistance from the responsible engineering authority.

19.1.4.5. (Added) The responsible planner will update all applicable WCDs on the shop floor to include end items in awaiting parts (AWP) status within fifteen working days after formal posting of TO changes that affect the WCDs. Production will assist in locating the affected WCDs when requested.

19.1.4.5.1. (Added) 309 AMARG inactive job plans do not require immediate updating, but will be reviewed for currency prior to reactivating for new workload.

19.1.4.5.2. (Added) Configuration management control of items in work (except 309 AMXG). Any maintenance technician detecting a WCD header configuration information error shall write “VOID” over the error in red. This technician will correct the error, M-stamp and date next to the correction, and inform the production supervisor. The production supervisor or designee will manually VOID and correct errors on similar WCDs in production by stamping and dating next to the corrections. Production will promptly notify scheduling of these corrections. The scheduler will VOID and correct items in AWP by C-stamping and dating next to the correction. The scheduler will notify the planner of any configuration management changes so the planner can correct the information within the applicable electronic WCD generation system. Examples of header errors would be incorrect noun (nomenclature), federal stock number, part number, operation number, job order number, etc.

19.1.4.5.3. (Added) 309 AMXG configuration management control of items in work. When informed by maintenance personnel, the planner will immediately correct and update any WCD header configuration information containing errors. Planners shall manually change WCDs on the shop floor. The planner shall IET-stamp and date next to the header changes. The planner will correct the information within the applicable electronic WCD generating system. Examples of header errors would be incorrect noun (nomenclature), federal stock number, part number, operation number, job order number, serial number, etc.

19.1.5. (Added) The 309 AMXG necessity for inclusion of paragraphs, tasks, and steps in a technical data reference shall be determined by the PPT. Under most circumstances, the technical data number is all that is needed to perform the work. However, if only certain portions of the technical data are to be performed, the WCD will specify which portions are to be performed (or omitted).

19.1.5. (Added) 309 AMARG reclamation WCDs for priority removals, save lists and miscellaneous WCDs are stand-alone documents, requiring no master WCD. DEMIL and HAZMAT handbooks are not classified as WCDs and are not subject to this instruction.

19.1.5.1. (Added) In the technical data block on WCDs, primary technical data will be listed first or identified as primary. When multiple tech data can be considered “primary”, each will be identified as such. If primary tech data is listed as IAW, all sub-operations not referencing independent technical data will be IAW. Identifying AFI, AFMCI, local OI etc., very rarely contain actual maintenance repair requirements and should not be included within the technical data block.

19.1.5.3.1. (Added) WCD change requests are normally submitted manually or via email on an AFMC Form 957, *Work Control Document Change Request*. Automated systems capable of gathering and tracking the same information required on an AFMC Form 957 may be used. 309 MXW personnel unable to use the AFMC Form 957 or an automated system will use the following change request procedures:

19.1.5.3.1.1. (Added) WCD change request by electronic mail (e-mail). Personnel will coordinate e-mail change requests through their supervisor or designee. The supervisor or designee will review the change request and forward the email to the appropriate planner for evaluation.

19.1.5.3.1.2. (Added) WCD change requests submitted manually. Personnel will coordinate manual WCD change requests through their supervisor or designee by providing a copy of the

actual WCD area that requires a possible change. The supervisor or designee will review the change request and forward to the appropriate planner for evaluation.

19.1.5.3.2. (Added) Administrative changes (spelling, grammar, punctuation, etc.) do not require immediate changes to the WCDs on the shop floor or AWP.

19.1.5.3.4.1. (Added) The 309 AMARG planner can make pen and ink corrections to printed WCDs “in work”. After the correction has been made, the planner annotates the reason for the correction, stamps, and dates in block 17. If additional notes are required in block 17, use “Notes on Back” procedures outlined in paragraph 19.2.1.3. If the correction requires an inspection/certification code change, the planner or supervisor will use procedures outlined in paragraph 19.1.5.8.8. The planner will also ensure the appropriate job plan is updated in MAXIMO with all necessary corrections. When all changes to the job plan are complete, enter the current date in the MOD date field.

19.1.5.3.5. (Added) A planner or appointed monitor will maintain an auditable file on change requests for a minimum period of 6 months per AFRIMS Table 21-5 Rule 1. This file will contain all approved and disapproved AFMC Forms 957, e-mail WCD change requests, and actual submitted manual copies of WCD areas requiring a planning change. Electronic filing and tracking of change requests is allowed when using an automated system (see paragraph 19.1.5.3.1.).

19.1.5.3.6. (Added) All submitted WCD change requests effecting form, fit, or function shall be evaluated against the prescribing technical data. Additionally, change requests may require formal coordination and approval through the PPT to include quality assurance and the applicable engineering organization when requested.

19.1.5.4.1. (Added) The PPT chairperson (planner) shall request mandatory attendance of the designated QAS on formal PPTs when the planner and production representative have determined a critical task is under consideration as defined in paragraph 19.1.5.8.3. and supporting paragraphs. The PPT will determine critical maintenance tasks and if applicable will request the cognizant engineering authority attend and/or respond to the PPT when a critical maintenance process is being reviewed. For example critical metallurgy processes, critical heat/bake processes, maintenance processes that contain planned dimensions, tolerances, and specifications (DT&S) on WCDs.

19.1.5.4.1.1. (Added) 309 AMARG 577th Commodities Reclamation Squadron (577 CRS) is not required to hold PPT meetings for workload requests but is required to convene meetings for all save list workloads. The PPT will document all meetings using the WCD Production Planning Team checklist AFMC Form 500 and maintain the worksheet on file for 1 year.

19.1.5.4.1.2. (Added) 309 AMXG PPT chairperson will notify via the 309 MXW/QPA office via email when mandatory QAS participation is required. Additionally, a cognizant QAS representative will in turn respond to the email stating that the package has been received for review.

19.1.5.5. (Added) Approved 309 MXW WCDs are: AFMC Form 173, AFMC Form 959, IMPRESA, ITS, MAXIMO, PDMSS computer generated AFMC Form 173, O&A unplanned/unpredictable WCDs generated from a MWR, and definitized lists when attached to an AFMC FORM 173. See Table 19.1.1. for instructions on ITS and IMPRESA WCDs and how these documents compare to the AFMC Form 959.

Table 19.1.1. (Added) Instructions for Completing AFMC Form 959, ITS and IMPRESA WCDs.

BL OC K #	TITLE	CONTENT
1.	Date	REQUIRED: Enter Date. On ITS and IMPRESA WCDs this is an automatic system generated date. This is the date the document is printed from the applicable system.
2.	Job Order Number	REQUIRED: Enter the control number and job designator (the three digits JON suffix will be inserted when the item is scheduled for work). For non-programmed workloads with a supporting AFMC FORM 206 JON in this block. ITS this is identified as the document ID Number (Doc ID NBR). IMPRESA this is identified as the project/ Work Breakdown Structure
3.	Quantity	Enter the quantity.
4.	Production	REQUIRED: Enter the symbol for the responsible Section/RCC performing production section/RCC. On ITS and IMPRESA this is located within the respective task description block.
5.	Date Scheduled	REQUIRED - SCHEDULER: The scheduling function enters the date when the items are placed into work. ITS; this is identified as the date printed. IMPRESA this is identified as the release date.
6.	Date Completed	REQUIRED - SCHEDULER: The scheduling function enters the date after the work is completely PAC and P/supervisory certified. ITS and IMPRESA WCDs have an task identified with a “C” MGT/CD and the scheduler stamps and dates this block.
7.	Part Number	Enter the part number. When the WCD is for more than one part then all part numbers, NSNs and production numbers can be listed, blocks 12 and 17 can be used for continuation. When multiple part numbers are listed, the scheduling function designates part number, NSN and control number combination for the item by circling the appropriate part when block five is completed.
8.	Tech Data	REQUIRED: On ITS and IMPRESA WCDs this field will identify primary technical data. Independent technical data may be listed as determined by the PPT. NOTE: The use of a separate governing directives block is not required.

9	Item Serial Number	REQUIRED: The mechanic or scheduler will enter the child serial number within the header of the WCD. To ensure strict configuration control the child component must be traceable and auditable to the specific WCD used to certify maintenance requirements on that specific child component.
10.	MDS	REQUIRED: Enter the MDS when the item is routed from an aircraft, engine, or other major end item.
11.	Stock Number	Enter the complete stock number to include the materiel management aggregation code if applicable.
12.	Optional	<p>If applicable, the following or equivalent statement may be identified: All operations identified on this WCD shall be done IAW unless identified as reference</p> <p>If applicable, the following or equivalent statement may be identified: Tasks must be accomplished and certified in step-by-step order.</p> <p>If applicable, the following or equivalent statement may be identified: DT&S are contained on this WCD.</p> <p>If applicable, other statements can be identified i.e. ESD sensitive equipment; cover and protect (C/P) move</p>
13	Serial Number	REQUIRED: The scheduling function will enter the parent/end item serial number.
14.	Noun	Enter the nomenclature identifying the item.
NOTE: Blocks 15, 16, 17, 18, 19 and 20 will be determined by the PPT and this information will be found within the ITS and IMPRESA task description block.		
15.	Dispatch Station Skill Code	<p>Enter the dispatch station number. When routed to more than one building include the building numbers.</p> <p>ITS and IMPRESA WCDs identify the dispatch station as the drop station.</p> <p>REQUIRED: Enter skill code for the task being performed.</p>
16.	PDN/OP Number	REQUIRED: Enter the performing RCC if different from block 4 and operations numbers from labor plan. Do not duplicate numbers.
17.	Work to be Accomplished	REQUIRED: On ITS and IMPRESA WCDs this block is considered the task description block and will have a description of work as determined by the PPT. The task description block identifies the work to be performed with the PPT determined auditable performance statement (i.e. inspect, test, rig, install, disassemble, repair, grind, machine, blast, clean, paint, etc.) and item name (i.e. generator, circuit card, valve, piston, stator, clutch, torque converter, bearing, housing, oil jet, retaining ring, etc.) If applicable, the task description will identify independent technical data not identified within the primary technical data.

		NOTE: ITS and IMPRESA WCDs will have separate tasks identified at the end of the document for a production supervisor (P) and scheduler (C) review.
18.	Mechanic	REQUIRED: On ITS and IMPRESA WCDs this field is identified with a production acceptance certification code (PAC/CD) (M, E, I, N).
19.	P	On ITS and IMPRESA WCDs this field is identified with the applicable management code (MGT/CD) (C, P, SP). Secondary Production Acceptance Certification (SP) block is used for E and I codes. The mechanic stamps and dates at the completion of the task.
20.	Q	Quality inspection code Q . The QAS stamps and dates at the completion of the required inspection/verification.
21.	Final Destination	Enter the destination or dispatch station and functional code of the RCC responsible for disposition of routed item. ITS and IMPRESA this may be identified within the document to a specific drop station.
22.	Coordination Initiating RCC Signature/Date	REQUIRED: Enter the office symbol, date and signature of the PPT representative. NOTE: This is no longer required on ITS and IMPRESA WCDs.
23.	Document S/N	Enter the serial number of the form as required. Sequential numbering may be used or this number can be used along with the publication date to control form revisions. It can also be used for suspense or other tracking purposes.

NOTE: (Added) Mandatory entries are identified as **REQUIRED**. ITS and IMPRESA generated versions of the AFMC Form 959 do not have blocks numbered and arranged as described. The above information will be entered on AFMC Form 959 to included ITS and IMPRESA system generated WCDs in the appropriate non-block/unnumbered fields.

19.1.5.5.1.1. (Added) Deviation from step-by-step task accomplishment shall not be permitted when the WCD contains the following or equivalent statement “Tasks must be accomplished and certified in step-by-step order” in (1) the WCD header (see Figure 19.1.1.) or (2) within the body of the applicable WCD (see Figure 19.1.2.) or (3) identified on the definitized list (see Figure 19.1.3.).

Figure 19.1.1 (Added) Example of WCD Header Step-By-Step Statement.

<p>TECH DATA:</p> <p>2G-GTCP-36-12 (PRIMARY)</p> <p>ASTME-E-1444</p> <p>MIL-STD-1504</p> <p>PO N03241</p> <p>SH252 51M00AAE833829R</p> <p>202 51M00AAE45678A</p>
<p>ALL OPERATIONS IDENTIFIED ON THIS WCD SHALL BE DONE IN-ACCORDANCE-WITH (IAW) UNLESS IDENTIFIED AS REFERENCE (REF)</p>
<p>TASKS MUST BE ACCOMPLISHED AND CERTIFIED IN STEP-BY-STEP ORDER</p>
<p>DIMENSIONS, TOLERANCES, AND SPECIFICATIONS (DT&S) ARE CONTAINED WITHIN THIS WCD</p>

Figure 19.1.2 (Added) Example of WCD Body Step-By-Step Statement.

NOTE					
"TASKS 50, 60, 70, 80 MUST BE ACCOMPLISHED AND CERTIFIED IN STEP-BY-STEP ORDER"					
NOTE					
50	MXXXX	XXXX	XXX	XX	<div>PAC/CD</div> <div>M</div> <div>DATE</div>
<p>INSTALL REAR COVER HOUSING ASSEMBLY</p> <p>IAW 2JA16-4-3</p>					
60	MXXXX	XXXX	XXX	XX	<div>PAC/CD</div> <div>M</div> <div>DATE</div>
<p>INSTALL VALVE PISTON</p> <p>IAW 2JA16-4-3</p>					
70	MXXXX	XXXX	XXX	XX	<div>PAC/CD</div> <div>M</div> <div>DATE</div>
<p>INSTALL VALVE PISTON CAP</p> <p>IAW 2JA16-4-3</p>					
80	MXXXX	XXXX	XXX	XX	<div>PAC/CD</div> <div>M</div> <div>DATE</div>
<p>INSTALL JFS LUBE PUMP ASSEMBLY</p> <p>IAW 2JA16-4-3</p>					

Figure 19.1.3 (Added) Example of Definitized List Step-By-Step Statement.

DCD: A1		WPN ID: 734	SERIAL NO: 80000215	OP NR: 25028	CTL NR: 00131	
Sub Op	Description	Insp	Mech	Pro Cert	Other/Insp	
<div> <div>NOTE</div> <div>TASKS MUST BE ACCOMPLISHED AND CERTIFIED IN STEP-BY-STEP ORDER</div> <div>NOTE</div> </div>						
00020	INSTALL 3/8" TUBE BULKHEAD FITTING (UNION) P/N 160D950315-11	M				
00030	INSTALL SHUT OFF VALVE MOTOR – TANK GATE PN 156130-10	M				
00040	INSTALL SLIP BUSHINGS IN HINGE FITTING BEFORE ATTACHING PUSHROD.	M				
00050	INSTALL TANK GATE VALVE BODY ASSY PN 138870-1	M				
*** END DEFINITIZED LIST ***						

19.1.5.5.1.2. (Added) All I-coded tasks shall be performed in the sequence they appear on the WCD. At no time shall an I-coded task be skipped over to perform another dependent sub-operation task. The following is a scenario for clarification: An AFMC Form 173 card states rig flight controls and the attached definitized list identifies two independent tasks with critical but independent sub-operations that are I-coded (1) rigging left flight controls and (2) rigging right flight controls. In scenarios such as this the I-codes can be stamped out of sequence because they are totally independent “major” tasks with independent sub-operations.

19.1.5.5.2.1. (Added) A work order request, and/or electronic version will be routed through planning for unpredictable/unplanned tasks. The supervisor or designee will P stamp and date the work order request, and annotate the PAC code required for the WCD operation. The planner will input the data from the work order request, into MAXIMO and generate an automated WCD. The planner will forward the WCD to the project scheduler so the over & above workload may be added to the schedule.

19.1.5.5.2.2.1. (Added) 309 AMXG procedures for use of work emergency WCDs.

19.1.5.5.2.2.1.1. (Added) Production ALS or ranking production supervisor (if no ALS is on duty) will determine necessity of work emergency WCD.

19.1.5.5.2.2.1.2. (Added) Flight test ALS or ranking production supervisor (if no ALS is on duty) will determine necessity of work emergency WCD.

19.1.5.5.2.2.1.3. (Added) An emergency MWR will be attached to a hand scribed AFMC Form 959. A hand scribed AFMC Form 959 will be used to document the emergency maintenance work and identified to the aircraft by tail number, operation number/MWR number. On the next regular workday morning or after immediate need situations have been addressed, the flight test

ALS will copy over the original emergency MWR in PDMSS to a new MWR and provide the original completed copy along with the completed hand scribed AFMC Form 959 to the appropriate planning section. Planning will review the copied over MWR and coordinate with PAO for disposition of the work requirements and associated hours for approval.

19.1.5.5.2.2.2. (Added) 309 EMXG and 309 MMXG procedures for use of work emergency WCDs.

19.1.5.5.2.2.2.1. (Added) All 309 EMXG and 309 MMXG emergency WCDs will utilize AFMC Form 959.

19.1.5.5.2.2.2.2. (Added) It is the responsibility of all 309 EMXG and 309 MMXG planners to correctly generate AFMC Form 959 or generic ITS work scope (W) document in lieu of ITS (G337) generated forms when circumstances are such, that an ITS generated form cannot be used or interruptions occur to the G337 system.

19.1.5.5.2.2.2.3. (Added) 309 EMXG and 309 MMXG ITS work scope (W) document or AFMC Form 959 will be computer generated or hand scribed when circumstances prevent the use of ITS documents. Such occurrences may include but are not limited to: extended power outage; data base failure or connectivity interruption; force deployment where connectivity, planning, or scheduling support is unavailable.

19.1.5.5.2.2.3. (Added) 309 AMARG and 309 CMXG, do not use work emergency WCDs. 309 MXSG will use 309 AMXG work emergency procedures.

19.1.5.5.2.3. (Added) If applicable, groups and PPTs utilizing definitized lists may consider procedures beginning with paragraph 19.1.5.8.3. of this supplement for definitized list development. Definitized lists may be used as a continuation of the technical data block (see paragraph 19.1.5.1.).

19.1.5.5.2.3. (Added) When procedures require a detailed step-by-step breakdown of a single operation, 309 AMARG will use MAXIMO to create a “definitized list” within a job plan/WCD. In the first operation in block 17, enter, “Task must be accomplished and certified in step-by-step order”. In the following operations in block 17, create step-by-step details of the single operation. At the end of the definitized list in block 17 of the last operation, enter “end of definitized list”. (Example: op-5, “Task must be accomplished and certified in step-by-step order”. Create ops-10 through 50 in step-by-step order. In block 17 of the last operation number, op-55, enter “end of definitized list”).

19.1.5.5.2.4. (Added) PDMSS-generated O&A unpredictable/unplanned WCD (see Figure 19.1.4.). The PDMSS-generated O&A WCD is initiated by a technician who "identifies (stumbles-on)" a defect and hand scribes the defect onto a PDMSS maintained work request worksheet when the defect is not covered by any E&I write up. See Table 19.1.3. for instructions on completing the PDMSS work request worksheet.

Figure 19.1.4. (Added) PDMSS-Generated O&A WCD.

U1 - OVER AND ABOVE

40. No. NSOF		41. ENG TIME		42. ENG SERIAL		43. YR/MFR		44. ENG MOS/TMS		45. T.O./ENG REF PARA/FIGURE STEP/INDEX 1A-10A-2-28MS-1				46. INSTALL REMOVE	
1. DATE	2. SKILL	4. DCD	4. WPN ID	3. OP NO	19. RCC	5. STD HRS	12. WK CAT	7. NO WKRS	8. AREA	9. MAT	10. CTL NO.	11. JD	23. WUC		
04226	AT	A1	734	99000	MXXXX	3.0	UNP	2	T2	N	06591	C	46000		
16. MDS	17. SERIAL NO	15. CREW CD	26. HOW MAL	28. WK SPC	25. WHN DIS	30. FAC	22. DATE CMP	24. ACT	29. INSP CD	27. UNITS	TYP DEL	32. ACT HRS			
A-10A	800215		799	AR	S	1			E						
31. DESCRIPTION ADDITIONAL FUEL COMPONENTS REMOVED FROM AFT FUEL CELL FOR R&R OF -119 REPAIR 160D214005-119									36. MECHANIC		37. PROD CERT		39. SCHEDULER		
IAW 1A-10A-2-28MS-1													38. QUALITY		
PARA/FIG:		STEP/INDEX:			WRK PKG:			WK CAT DESC: UNPREDICTABLE							
31A: CORRECTIVE ACTION INSTALL FUEL COMPONENTS AFTER REPAIR OF -119															
WORK REQUEST:															

Table 19.1.3. (Added) Instructions for Completing PDMSS Generated *Work Request Worksheet*.

BLOCK TITLE	DESCRIPTION
Date	(Responsibility of initiator) The date of initiation of work request worksheet.
Reference Number	(Responsibility of initiator) Optional, master MWR number.
Defect Class	(Responsibility of initiator, can be changed by supervisor) To be used to describe the severity of the defect described on the MWR. Includes blank (for INFO notes), X, /, -, SOF, NSOF, NSF (local), MINA (local minor not accessible).
Zone/Area	(Responsibility of initiator) Zone or area in which the defect described can be found. Zones and areas are found in the statements of work associated with the repair.
Inspector	(Responsibility of initiator) The inspector code will be the CAMS number or stamp number of the actual inspector (E&I, engine, etc.) doing inspections on the aircraft.
Requestor	(Responsibility of initiator) The requestor block will be used by any requestor other than inspectors. CAMS number will be used.
Work Unit Code	(Responsibility of initiator) Code found in -06 technical orders to identify the part being described in the MWR description block.
Work Spec Code	(Responsibility of PAO or planner) Work Specification Code from the MRRB brochure or other source. Describes the task the work in the description block falls under.
Inspection Code	(Responsibility of initiator, can be changed by supervisor, planning or PAO) Code found in AFMCI 21-101 SUP1 or other document that describes the level of inspection. Usually in conjunction with the defect class.
How Mal Code	(Responsibility of initiator) Code found in weapon specific -06 TO identifying the defect described in the MWR description block.
Incoming Condition	(Responsibility of initiator) The requestor will circle either Y for yes or N for no.
IAW	(Responsibility of initiator) The requestor will circle either Y for yes or N for no. This show if the TO needs to be open/used while doing the task.
Technical Data Required	(Responsibility of initiator) Either a TO (including job guide) or engineering reference to be used in the repair of the defect described in the description block. The -4 reference may be used here if the purpose of the MWR is to manufacture a part. Otherwise, the block will indicate the technical data to be used in the work involved.
Para/Figure	(Responsibility of initiator) Extension of the technical reference, if needed.

Step/Index	(Responsibility of initiator) Extension of the technical reference, if needed.
Work Package	(Responsibility of initiator) Further extension of the technical reference, if needed.
Serial Number/Part Number	(Responsibility of initiator) Serial number of serialized part involved on the MWR. (For instance, engine serial number) Part number of part on MWR, or part to be local manufactured on the MWR.
Part Quantity	(Responsibility of initiator) Number of parts in the serial number/part number block.
Skill	(Responsibility of initiator) Skill code to perform the work described in the description block.
Workers	(Responsibility of initiator) Number of workers expected to be working on the defect in the description block.
Actual Hours	(Responsibility of initiator) May be .1 for E&I initiated MWRs, or actual requested hours, estimated by the requestor. Final approval of hours will be paid by the PAO and planner to the RCC for the work described. If there is a planned operation covering the discrepancy/description the request may be attached to an operation as a MWR definitized guide.
Organic	(Responsibility of initiator) Type of work, the requestor will circle either Y for yes or N for no.
Material	(Responsibility of initiator, can be changed during processing) Materiel. Codes are N, K, and M. N = None required. K = Kit, M = Material may be required for this MWR. "M" includes local manufacture. Indicator only.
Action Taken Code	(Responsibility of initiator) Action Taken Code, found in 06 technical orders to indicate what type of actions will be or have been taken on the part described on the MWR.
Rework	(Responsibility of initiator, but may be changed by the planner or PAO) "Y" or "N" entry. Indicates if the work on the MWR is rework, not to be paid for, but approved to be accomplished.
CANN/Rob	(Responsibility of initiator) Field to indicate the "other" related tail number involved if the MWR describes work connected to cannibalization or robbing of a part.
AFMC Form 959 Needed	(Responsibility of initiator, but may be changed by the planner or PAO)"Y" or "N" entry. May be requested by the planner or PAO to justify the hours requested.
Discrepancy Description	(Responsibility of initiator) A complete description of the defect. May include part numbers, serial numbers, stations on the aircraft, other technical references used in the work, etc.
If Required Follow-On	Also required is information on any follow on maintenance or functional or operational checks required; if none, a check mark will be placed here.

Maintenance	
Corrective Action	(Responsibility of initiator) The process followed by the mechanic in repairing the defect described on the description block, may be blank on input. Should not be left blank on the WCD after completion of work.
Foreman Stamp	(Responsibility of Foreman) “P” stamp placed here after review of worksheet for accuracy paying particular attention to the inspection code before giving to the ALS for input in PDMSS.
Tail Number	(Responsibility of initiator) Tail number of aircraft requiring MWR.
Work Request Number	(Responsibility of ALS) ALS will write down request number given by the system, PDMSS for aircraft it was input for.
Input	(Responsibility of ALS) ALS will put date and time of input of the work request.

19.1.5.5.5.1. (Added) The PPT will review all contractor supplied WCDs using the AFMC Form 500, *Work Control Document Production Planning Team Checklist*. The PPT will determine if the contractor supplied WCD needs to be supplemented. If the contractor supplied WCD requires additional information, the planner will elevate it to the applicable contracting authority. The planner will maintain a “master” hard copy of contractor supplied WCDs if these documents are not electronically maintained.

19.1.5.5.6. (Added) Level of effort and other non-Management Items Subject to Repair (MISTR)/non-PDM workloads will use the procedures identified in Table 19.1.4. to develop the AFMC Form 959.

Table 19.1.4. (Added) Instructions for AFMC Form 959, *Non-MISTR Level of Effort Workloads*.

BLOCK	DESCRIPTION	DEFINITION
Mandatory entries are identified as REQUIRED. The following information will be entered in the appropriate blocks.		
2.	Job Order Number	REQUIRED: Enter the control number and job designator (the three digits JON suffix will be inserted when the item is scheduled for work). Level of effort JON.
4.	Production	REQUIRED: RCC Designator.
5.	Date Scheduled	REQUIRED - SCHEDULER: The scheduling function enters the date when the items are placed into work.
6.	Date Completed	REQUIRED - SCHEDULER: The scheduling function enters the date after the work is completely PAC and P/supervisory certified.
8.	Technical Data	REQUIRED: Enter the primary technical data source. Independent technical data that does not fall under the primary

		will be entered in block 17. For example test directive, test plan etc.
12.	Optional	Internal Project Number.
14.	Noun	REQUIRED: Enter the nomenclature identifying the item.
17.	Work to be Accomplished	REQUIRED: Enter description of work or process, Secondary Certification tasks must be listed separately.
18.	Mechanic	REQUIRED: PAC certification code M E I N . The mechanic stamps and dates the completion of the operation/task. Scheduler will stamp (C-Stamp) and date when required by this chapter/supplement. When task is administrative in nature an X code will be designated.
19.	P	REQUIRED: Supervisor verification P stamp will be entered when required. The supervisor stamps and dates at the completion of the required inspection/verification. Secondary certification block for E and I codes. The mechanic stamps and dates at the completion of the operation/task.
20.	Q	Quality Inspection code Q . The QAS stamps and dates at the completion of the required inspection/verification.
22.	Coordination Initiating RCC Signature & Date	REQUIRED: Enter the office symbol, date, and signature of the PPT representative.

19.1.5.5.6.1. (Added) 309 AMXG. When the AFMC Form 959 is being used as a emergency hand scribed definitized list attachment to an unplanned WCD, or when being used to build a master AFMC Form 959 WCD's definitized list attachments to a AFMC Form 173. Use blocks 7 for operation/MWR number. Block 10, MDS. Block 12 optional used for master O & A definitized list. Block 13, tail number. Block 17, task accomplished, 18, inspection code required (M,E, or I) certification stamp and date, Blocks 19 and 20, certification stamp and date if applicable.

19.1.5.5.7. (Added) New and Revised Workload First Article Inspection.

19.1.5.5.7.1. (Added) All WCDs or other records for first article, prototype and revised workload inspections will have a unique identifier to distinguish it from established WCDs and records of ongoing workloads. Printing on a designated color of paper may be an option.

19.1.5.5.7.2. (Added) First article and prototype inspections of products and deliverable software will be scheduled and performed IAW the standard engineering guide and 309 MXW Software Maintenance Group policy or AFMCI 21-156.

19.1.5.5.7.3. (Added) A full article inspection (FAI), or a partial FAI for affected characteristics of a revised workload, shall be performed and records of such a FAI shall be attached to the original FAI record, so that evidence is retained of the full qualification for all characteristics.

19.1.5.6.1.1. (Added) General maintenance tasks not covered by technical data but requiring PAC certified mechanics will minimally have an inspection/certification code of “M” assigned. Examples of general maintenance tasks could be: process in, process out, uncrate, verify material, preparation of tooling, etc.

19.1.5.6.1.2. (Added) X-coded tasks do not require the individual to be PAC certified. X-coded tasks will be stamped and dated to denote task accomplishment. The X-code is used for tasks that are administrative in nature to include but not limited to tasks that are informational in nature, used for scheduling (trigger operations), non-maintenance related time tracking, routing, perform overhead support operations, etc.

19.1.5.6.1.3. (Added) Block 31 of an AFMC Form 173 may contain the statement “See Definitized List” to continue multiple technical data listing if required.

19.1.5.6.2. (Added) The 309 AMARG will not use specification and tolerances verbatim or any similar information from technical data on WCDs.

19.1.5.6.2.5. (Added) The planning organization shall ensure the planner or appointed DT&S monitor maintains a log of all WCDs containing DT&S. This log may be in an electronic format or in a manually maintained logbook.

19.1.5.6.2.5.1. (Added) WCDs containing planned DT&S shall have an annual PPT review using AFMC Form 500 to ensure the currency and correctness of planned DT&S per the governing technical data.

19.1.5.6.2.5.2. (Added) Any WCD containing planned DT&S shall have within the header of the WCD the following or equivalent statement “DT&S are contained within this WCD.”

19.1.5.6.2.6. (Added) The planner shall make the change and IET-stamp and date the change. Production will assist in locating the affected WCDs when requested.

19.1.5.6.2.8. (Added) If a technical data change updates any planned DT&S contained on a WCD, the planner will conduct a PPT review using the AFMC Form 500. The planner will ensure the WCD is updated within 15 working days after formal posting of the TO change.

19.1.5.6.3. (Added) Initial incoming WCD NDI Requirements: Any 309 MXW authorized MISTR, programmed, planned, temporary, unpredictable, or contractor WCD requiring approved NDI technical data or techniques shall be fully evaluated and approved through the 309 MXW Level III NDI technician and NDI element chief.

19.1.5.6.3.1. (Added) NDI requirements will be developed and implemented IAW the most current NDI technique. WCD tasks requiring NDI techniques will be developed according to Figure 19.1.5. (equivalent statements can be used). The planner will identify the specific NDI technique and technical data within the WCD task description block if not already identified within the primary technical data. Additional process routes may be included within the task description block.

19.1.5.6.3.2. (Added) An NDI technician finding deficiencies will enter all defects noted in the task description block or note within the task block see NDI inspection report for defect findings.

The NDI technician will mark all part defect areas if feasible. The certification block for the NDI operation will be red-circled (see paragraph 19.1.8.8.).

19.1.5.6.3.3. (Added) An 309 AMXG-NDI technician finding deficiencies will submit an MWR for defects discovered during NDI processing. For deficiencies not addressed and/or outside the limits of the technical data, an AFMC Form 202 will be submitted and the approved AFMC Form 202 will accompany the O&A WCD.

19.1.5.6.3.4. (Added) If no NDI process technique exists, the NDI element chief will be notified and the procedures contained in Table 19.1.5. will be followed.

Figure 19.1.5. (Added) Example of WCD NDI Requirements.

<div style="text-align: center; border-bottom: 1px dashed black; margin-bottom: 5px;"> XXXX 70 </div> <p>PERFORM "REQUIRED INITIAL" NDI CONDITION CHECK USING SPECIFIC TECH DATA NDI TECHNIQUE</p> <p>NDI DEFECTS NOTED:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p style="text-align: center;">***NOTE*** NDI MARK ALL CRACK INDICATIONS</p>	<div style="text-align: center; border-bottom: 1px dashed black; margin-bottom: 5px;"> PAC/CD </div> <div style="border: 1px solid black; padding: 5px; margin: 5px;"> N </div> <div style="border-top: 1px dashed black; height: 10px; margin: 2px 0;"></div> <div style="text-align: center;">DATE</div>
<div style="text-align: center; border-bottom: 1px dashed black; margin-bottom: 5px;"> XXXX 80 </div> <p>E&I EVALUATE NDI DISCREPANCIES & DETERMINE REPAIRS USING APPROVED TECH DATA SELECTING APPROPRIATE REPAIR OR INITIATING AFMC IMT 202 TO PLANNING</p> <p>E&I ANNOTATE REQUIREMENTS:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<div style="text-align: center; border-bottom: 1px dashed black; margin-bottom: 5px;"> PAC/CD </div> <div style="border: 1px solid black; padding: 5px; margin: 5px;"> M </div> <div style="border-top: 1px dashed black; height: 10px; margin: 2px 0;"></div> <div style="text-align: center;">DATE</div>

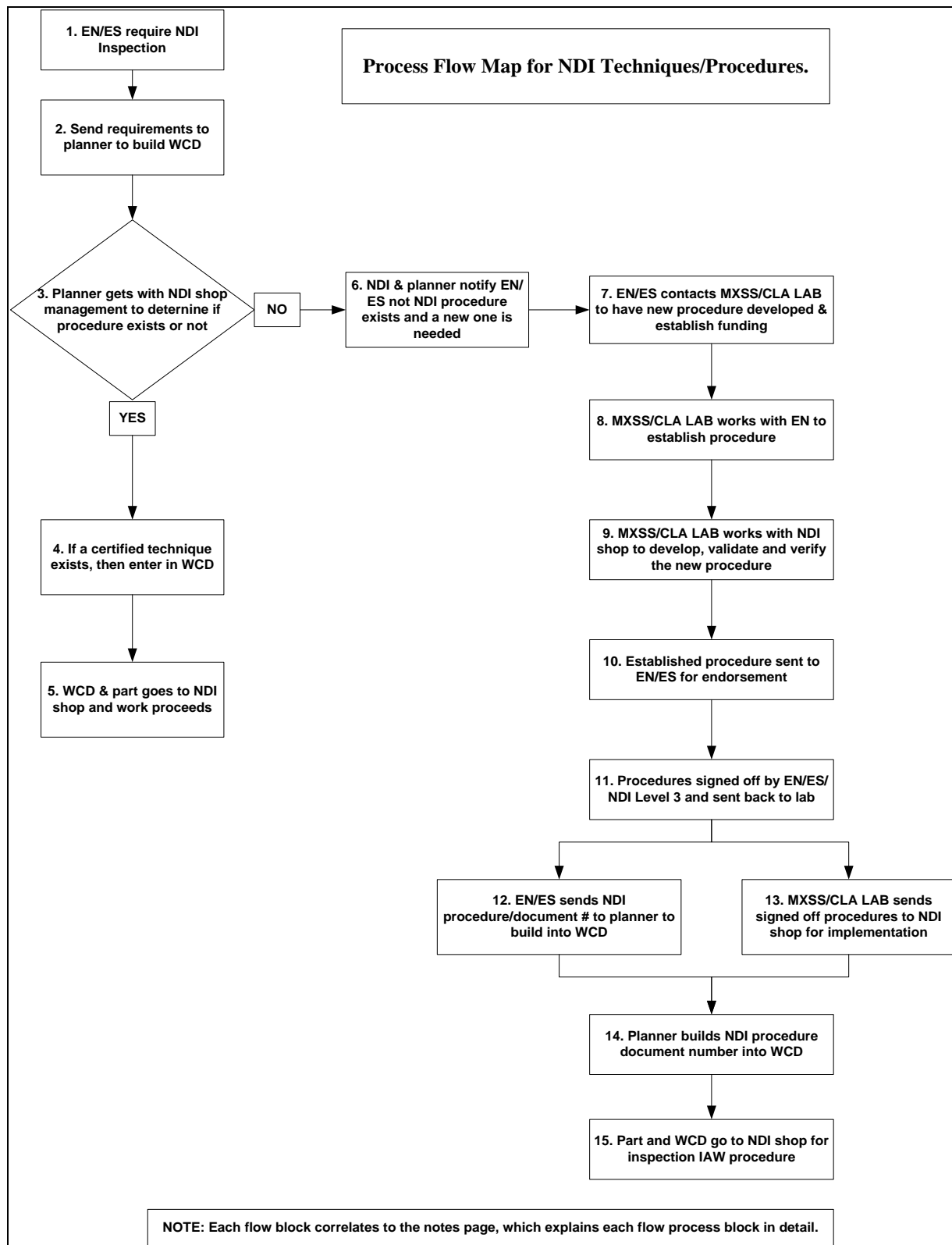
Table 19.1.5A. (Added) Process Flow Map for NDI Techniques/Procedures.

1.	Engineering/equipment specialists have new requirement to have a NDI inspection performed upon a part:
a.	Fluorescent Penetrant Inspection (FPI)
b.	Fluorescent Magnetic Particle Inspection (FMPI)
c.	ET
d.	RT
e.	UT
f.	ST
2.	Planner receives requirement from EN and ES to have NDI perform inspection and build WCDs to meet this requirement.
3.	Planner coordinates with NDI shop supervisor/work leader to determine if NDI procedures already exist that can be entered on the WCD to perform work

a.	If the answer to step 3 is YES continue with steps 4 and 5.
b.	If the answer to step 3 is NO skip steps 4 and 5, go directly to step 6.
4.	NDI supervisor or work leader concurs that the document/technical data that the planner will reference to in the NDI operation block of the WCD is correct and has a valid NDI procedure for the inspection called out for.
5.	WCD and part are forwarded to the NDI shop where inspection proceeds.
6.	NDI supervisor or work leader and planner meet with EN/ES to notify them that there is no established NDI procedure documented to inspect this part.
7.	EN/ES contacts OO-ALC NDI manager in the lab to have the 809 MXSS/CLA Physical Sciences develop a NDI procedure that meets EN/ES requirements for that part.
a.	Also at this time funding for the 809 MXSS/CLA to support this effort is established (i.e. 206).
b.	Funding is started from the requesting planning office.
8.	809 MXSS/CLA OO-ALC NDI manager works with EN/ES on the development of the NDI procedure to ensure EN/ES are getting the results needed and 809 MXSS/CLA knows all requirements i.e.:
a.	Type of defect/s looking for.
b.	Size.
c.	Location.
d.	Geometry.
e.	100% inspect or just a section of part.
f.	Accept/reject criteria.
g.	One time inspection.
h.	Requires new equipment.
i.	Inspection just accomplished at Hill AFB or other bases.
j.	Written procedure put in TO, TD, PO or locally developed procedure book/log.
9.	809 MXSS/CLA works with NDI shop to validate and verify new procedure, and ensure NDI shop can perform inspection. Identify if any training of NDI personnel needs to be accomplished for new procedure.
10.	Finished procedure is sent to EN/ES for endorsement/signature.
11.	EN/ES sends procedure back to MXDTA.
12.	EN/ES notifies planner of valid established procedure and gives planner document number of that procedure.
13.	809 MXSS/CLA forwards new procedures to NDI shop for implementation.
14.	Planner builds NDI procedure document number into WCD.

15.	Part and WCD get forwarded to NDI shop for inspection.
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Table 19.1.5B. (Added) Process Flow Map for NDI Techniques/Procedures.



19.1.5.7. (Added) As required, a technician can manually record measurements taken during maintenance processes onto the WCD within the task description block. 309 AMARG will use the “Notes on Back” procedure found in paragraph 19.2.1.3.

19.1.5.8.1.1. (Added) The following Management Code (MGT/CD) are used on ITS and IMPRESA WCDs. “C” is used to indicate the WCD task requires a Scheduler’s review ensuring all certification blocks have been stamped and dated. “P” is used to indicate the WCD task requires a supervisor's review ensuring all steps are properly completed, stamped and dated. The MGT/CD “SP” (secondary PAC) is used to indicate the WCD task is critical and requires dual certification with either an “E” or “P” in the PAC/CD block. For ITS generated WCDs refer to Figure 19.1.6. and for IMPRESA generated WCDs refer to Figure 19.1.7.

NOTES: (Added) On ITS and IMPRESA WCDs the PAC CD is equivalent to block 18 on the AFMC Form 959. On ITS and IMPRESA WCDs the MGT/CD is equivalent to block 19 on the AFMC Form 959. Currently, ITS software places MGT C/D of “C”, “P”, and “X” in the far left certification column. IMPRESA software places MGT C/D “C” and “P” in the far right certification column.

Figure 19.1.6. (Added) Management Codes “SP”, “P”, “C” on ITS Generated WCD.

XX	MXXXX	XX	XXX	XXX	XX	PAC/CD E <hr/> DATE	MGT/CD SP <hr/> DATE
PERFORM FINAL VISUAL INSPECTION REF 2 G- GTCP36-2							
XX	MXXXX	XX	XXX	XXX	XX	PAC/CD I <hr/> DATE	MGT/CD SP <hr/> DATE
PERFORM FO INSPECTION TECHNICAL DATA NOT REQUIRED							
XX	MXXXX	XX	XXX	XXX	XX	MGT/CD P <hr/> DATE	
SUPERVISOR REVIEW TO ENSURE ALL TASKS ARE PROPERLY COMPLETED, DATED, AND STAMPED TECHNICAL DATA NOT REQUIRED							
XX	MXXXX	XX	XXX	XXX	XX	MGT/CD C <hr/> DATE	
SCHEDULER REVIEW TO ENSURE ALL REQUIRED CERTIFICATION BLOCKS HAVE BEEN STAMPED AND DATED TECHNICAL DATA NOT REQUIRED							

Figure 19.1.7. (Added) Management Codes “SP”, “P”, “C” on IMPRESA Generated WCD.

XX	MXXXX	XX	XXX	XXX	XX	PAC/CD E DATE	MGT/CD SP DATE
PERFORM FINAL VISUAL INSPECTION REF 2G-GTCP36-2							
XX	MXXXX	XX	XXX	XXX	XX	PAC/CD I DATE	MGT/CD SP DATE
PERFORM FO INSPECTION TECHNICAL DATA NOT REQUIRED							
XX	MXXXX	XX	XXX	XXX	XX		MGT/CD P DATE
SUPERVISOR REVIEW TO ENSURE ALL TASKS ARE PROPERLY COMPLETED, DATED, AND STAMPED TECHNICAL DATA NOT REQUIRED							
XX	MXXXX	XX	XXX	XXX	XX		MGT/CD C DATE
SCHEDULER REVIEW TO ENSURE ALL REQUIRED CERTIFICATION BLOCKS HAVE BEEN STAMPED AND DATED TECHNICAL DATA NOT REQUIRED							

19.1.5.8.2. (Added) Any WCD task having an assigned inspection/certification code to include management code shall be stamped and dated when completed. Any production supervisors certifying an actual maintenance task will meet the same training, qualification, and certification requirements as the PAC certified employee and will require a PAC record.

19.1.5.8.2.1. (Added) 309 AMARG a P-stamp will not be used to certify completion of a maintenance task.

19.1.5.8.3. (Added) PPTs shall review all technical data and tasks ensuring identification of critical tasks. Critical tasks require the technician to have technical data open and in use. This means that the technician has reviewed warnings, cautions, and notes for the task before starting the job. The technician has the approved guidance (job guide, technical order, AFMC Form 202, etc.) open to the applicable area in work. The technician performing the task will be able to point to the exact step being accomplished in the technical data but need not be on the exact page when approached.

19.1.5.8.3.5. (Added) The PPT will determine critical maintenance tasks. When a critical maintenance process is being reviewed the PPT will request the cognizant engineering authority attend and/or respond to the PPT. For example, critical metallurgy processes, critical heat/bake processes, and maintenance processes that contain DT&S on WCDs. PPT determined critical tasks covered by tech data will have tech data identified as IAW. WCD critical tasks not covered by technical data will contain the following or equivalent statement, “Technical Data Not Required” within the task description block. The following provides minimum requirements the PPT will use to identify WCD critical and IAW tasks:

19.1.5.8.3.5.1. (Added) If the task requires the use of an AFMC Form 202. The PPT may request mandatory QAS attendance.

19.1.5.8.3.5.2. (Added) Use of tech data identified as “Preliminary” and “Prototype” will be identified as IAW. The PPT may request mandatory QAS attendance.

19.1.5.8.3.5.3. (Added) The task identifies a secondary certification of “I”. The FO inspection should not be identified as “IAW” unless the technical data specifically requires the performance of a FO inspection and then this FO task shall be identified as IAW. The PPT may request mandatory QAS attendance.

19.1.5.8.3.5.4. (Added) Task requires a “critical” measurement be taken to determine serviceability, ensure proper assembly or are required in order to proceed to the next step in repair or test process. The PPT may request mandatory QAS attendance.

19.1.5.8.3.5.5. (Added) Task requires critical “specific” torque requirements in order to assemble or test an item. Example: Torque of a panel fastener or clamp bolt is a general torque while the torque on a bearing retaining nut is a “specific” torque. The PPT may request mandatory QAS attendance.

19.1.5.8.3.5.6. (Added) Tasks are identified as “Tasks Must be Accomplished and Certified in Step-By-Step Order.” The PPT may request QAS attendance.

19.1.5.8.3.5.7. (Added) Task involves critical assembly, installation, inspection, repair, rigging, functional/operational testing, etc., of munitions, rocket motor, life support system, egress system, aircraft canopy, landing gear, aircraft engine and components of aircraft engines, aircraft auxiliary power systems, aircraft gearboxes, aircraft flight control surfaces, aircraft hydraulic and fuel components. The PPT will request mandatory QAS attendance on the PPT.

19.1.5.8.3.6. (Added) Other criteria that can be used to identify WCD tasks as IAW are tasks with chronic: (1) rework issues, (2) deficiency reports, (3) quality assessment ratings of three (QAR-3), and (4) quality verification inspections rated QAR-3.

19.1.5.8.5. (Added) All WCD FO/Rag inspections will be coded with either an “E” or “I” inspection certification code.

19.1.5.8.7.1. (Added) When critical tasks (secondary in-process certification) are performed by a team, the team chief will brief all team members on safety requirements prior to task initiation. In cases of incomplete work at shift change, sufficient documentation will be provided by the off-going shift supervisor or wage leader to ensure the work, when continued, will not require unnecessary re-accomplishment of previous tasks. Tasks on the WCD not completed due to shift change will be annotated as follows:

19.1.5.8.7.1.1. (Added) The off-going supervisor or wage leader will describe the completed work in an established log book. The technician who subsequently completes the task will certify completion by properly stamping and dating the WCD task in the appropriate certification block.

19.1.5.8.7.1.2. (Added) If the follow-on technician is unable to appraise the work already completed the shift supervisor or wage leader will determine how to proceed.

19.1.5.8.7.2. (Added) When definitized lists are used to document tasks accomplished by more than one individual, the individual certifying the source AFMC Form 173 is stating that the operations he/she performed on the definitized list were done correctly and all other tasks on the definitized list are stamped/dated. The source AFMC Form 173 should be M-coded.

19.1.5.8.7.2. (Added) For 309 AMARG team task certifications, the person designated as team leader will ensure all tasks of the operation have been completed, stamped and dated on the WCD.

19.1.5.8.8.1. (Added) 309 AMARG: This will also include changing an X code to an M code. The supervisor will not date and stamp above the inspection block. The date and reason for the upgrade will be annotated on the back of the WCD using the “Notes on Back” procedures in paragraph 19.2.1.3.

19.1.5.8.8.2. (Added) 309 AMARG: A Q-code may be added by a QAS for the purpose of identifying an operation the QAS wants to evaluate at completion. The QAS will add a Q in red ink in block 20. The date and reason for the change will be annotated on the back of the WCD using the “Notes on Back” procedures in paragraph 19.2.1.3. A QAS will stamp and date block 20 when the evaluation is complete.

19.1.5.8.8.3. (Added) 309 AMARG: The planner and production supervisor will not date and stamp above the inspection block. The date and justification for the change will be annotated on the back of the WCD using the “Notes on Back” procedures in paragraph 19.2.1.3.

19.1.6.1. (Added) When a 309 AMARG aircraft is moving to a new maintenance phase, the existing WCD is closed in MAXIMO, and all operations reviewed for completion. Remaining open operations will be carried forward to the aircraft AFTO Form 781 forms or to a carry forward WCD for completion later in the process. Operations to be carried forward will be identified on the original WCD by using “Notes on Back” procedures. On the back of the page, annotate operation number, "Carried forward to WCD or 781" stamp and date. After the original WCD is completed and closed, the new WCD for the next maintenance phase will be activated and issued to the appropriate production teams. Items identified as "over and above" and not approved for repair by the PAO, will be similarly annotated on the WCD and included in the aircraft 781 forms upon their re-instatement.

19.1.6.2. (Added) After the 309 AMXG MRT transfers an aircraft to flight test, all discrepancies documented in the aircraft form 781 will have a mirroring WCD to accompany each discrepancy. All discrepancies, planned and over and above listed in the 781A's will reference the assigned MWR number or WCD operation number. This number will be annotated within the discrepancy block.

19.1.6.3. (Added) 309 AMXG will document non-production crash damage repair aircraft maintenance actions using AFTO Form 781 series and/or AFMC Form 959.

19.1.8. (Added) 309 AMXG rework is defined as all labor hours expended and/or material utilized to correct nonconforming conditions (damage) caused as a result of maintenance actions, or lack of action, while an asset (end item, weapon system, subsystem, or any part thereof, etc.,) is under 309 AMXG control. The labor hours expended to correct “organically caused” deficiencies fall under the category of rework.

19.1.8.1. (Added) A short informational note will be included in the task description block indicating why an item must be reworked. See Figure 19.1.8.

Figure 19.1.8. (Added) Rework Documentation.

The figure displays four examples of Rework Documentation forms, which are Work Order (WCD) forms used for tracking rework. Each form is a grid with various fields for tracking rework, including a header section for 'REWORK' and a main body for 'DESCRIPTION' and 'ACTION'.

The first form (top left) is a standard Rework WCD. It includes a header section with 'REWORK' in red, a 'Last Review Date' field, and a main body with fields for 'DESCRIPTION', 'ACTION', and 'SCHEDULE'. The description field contains text about a 'PERFORM OPS CK ALERON TRIM TAB ASSY. VERIFY' and a barcode.

The second form (top right) is a Rework WCD with a handwritten date 'MAR 18 2004' in red ink. It includes a 'REWORK' header and a 'DESCRIPTION' field with text about a 'PERFORM OPS CK ALERON TRIM TAB ASSY. VERIFY' and a barcode.

The third form (bottom left) is a Rework WCD with a handwritten date 'FEB 21 2004' in red ink. It includes a 'REWORK' header and a 'DESCRIPTION' field with text about a 'PERFORM OPS CK ALERON TRIM TAB ASSY. VERIFY' and a barcode.

The fourth form (bottom right) is a Rework WCD with a handwritten date 'FEB 21 2004' in red ink. It includes a 'REWORK' header and a 'DESCRIPTION' field with text about a 'PERFORM OPS CK ALERON TRIM TAB ASSY. VERIFY' and a barcode.

19.1.8.4. (Added) Flight Test Rework. If flight test discovers a problem suspected to be rework, the responsible scheduler and planner will email the appropriate production supervisor or designee and scheduler a description of the discrepancy and courtesy copy the PAO. The production supervisor or designee will research the suspected discrepancy. If the supervisor or designee determines that it is rework they will “Reply to All” in original email, provide the responsible scheduler and planner with the operation number suspected of causing the rework and a rework MWR will be submitted and a O&A WCD generated and approved for 0 hours. The following statement will be entered in the planners dispute block “REWORK Operation Number (OP) OPXXXXX”. If the supervisor or designee determines it is not rework they will notify the responsible scheduler and planner that the discrepancy was an incoming condition and an MWR is submitted and an O&A WCD generated and approved for time. The following will be entered in the planner's dispute “INCOMING CONDITION”.

19.1.8.5. (Added) 309 AMARG when the 577 CRS receives a report of discrepancy that a wrong part is sent to a customer and it is determined that the fault lies with 309 AMARG, rework procedures will be as follows: Obtain the original completed WCD; create a new WCD with a suffix to the original document number and man-hour accountability charged to “rework”. Attach a copy of the completed original WCD to the new WCD. When the part in question is returned to 309 AMARG, it will be processed into the storage account through the 578th Storage & Disposal Squadron. The status of the part on the removal item listing (C03) will be changed to storage account or return to aircraft by reversing the “L” code transaction.

19.1.8.6. (Added) 309 AMXG Rework. It is the responsibility of 309 AMXG to strive for constant product improvement by identifying inefficient maintenance operations such as workmanship defects that lead to rework of an end item. Data relative to the cost, profit and loss, labor, and material associated with that rework will be collected and analyzed to determine if rework costs have exceeded the fiscal year budget. This data is found in the Time and Attendance (TAA) System by inquiry in “Processed Labor” by rework JON (X51112614000) and RCC and date range.

19.1.8.6.1. (Added) 309 AMXG the production chiefs assigned to 309 AMXG will ensure compliance with the guidelines specified in this section, and will be responsible to ensure adequate corrective actions are taken to validate the process that contributed to the rework, (e.g., rework is accomplished, training provided, tooling and equipment are upgraded, etc.). Any information that identifies the effectiveness of corrective actions taken by the production chiefs will be briefed to 309 AMXG during the monthly squadron level team review.

19.1.8.6.1.1. (Added) The 309 MXW/QPA will perform an audit of rework procedures upon request.

19.1.8.6.2. (Added) 309 AMXG Rework of Items Still in Maintenance:

19.1.8.6.2.1. (Added) Production personnel performing maintenance actions will verbally advise their production supervisor when any material or end item, weapon system, subsystem, or any part thereof, etc., is damaged as a result of maintenance actions, or lack of, to include defects attributable to errors in workmanship while the end item is still undergoing maintenance.

19.1.8.6.2.2. (Added) The production supervisor will assess damage caused as a result of maintenance actions and any errors in workmanship. The production personnel mechanics or supervisors will complete an MWR worksheet for aa aircraft maintenance squadron. All rework reported will need to be identified back to the originating cell or RCC that performed the maintenance. Comments on the worksheet or MWR must be completed following guidelines beginning in paragraph 19.1.8.7.7. of this chapter. The scheduler/ALS or planner will initiate appropriate WCD(s) for all rework. Scheduler/ALS will electronically file the worksheet or MWR into the appropriate systems.

19.1.8.6.2.3. (Added) The planner or scheduler will attempt to identify all rework back to the original operation. The mechanic will enter the time into PDMSS or via TAA and log onto the WCD the scheduler has assigned for rework.

19.1.8.6.2.4. (Added) 309 AMXG the following categories are not considered rework:

19.1.8.6.2.4.1. (Added) Unavoidable periodic calibrations and adjustments.

19.1.8.6.2.4.2. (Added) Work normally required to hand-fit or select-fit parts in an assembly.

19.1.8.6.2.4.3. (Added) Work done as a result of incoming or preliminary diagnostic tests and inspections performed to determine necessary repairs and replacements. When an item fails a particular step in a diagnostic test composed of a number of sequential steps, is then repaired but subsequently fails a later step in that test, rework will not be charged unless the subsequent failure is attributable to a discrepancy in the earlier repair.

19.1.8.6.2.4.4. (Added) Additional work performed as part of the most economical method of doing a job. The exclusion does not apply when the additional work is required to correct work previously done on an item.

19.1.8.6.3. (Added) 309 AMXG Management of Rework Costs While TDY. If the purpose of the TDY is to correct a discrepancy due to 309 AMXG maintenance actions, the team chief will ensure all costs are charged to overhead as stated in this section.

19.1.8.6.4. (Added) 309 AMXG Quality Deficiency Reports. When analysis of the QDR exhibit determines the technology repair center was at fault, all material and labor associated with the rework of the end item will be done IAW the instructions in this section.

19.1.8.6.5. (Added) 309 AMXG Labor Costs: Production count will not be taken for operations undergoing rework. The production shop employee will document time expended on rework against X51112614000.

19.1.8.6.6. (Added) 309 AMXG Ordering Material.

19.1.8.6.6.1. (Added) Production shop employees will use an AFMC Form 95, *Issue Request*, for any material ordered in support of rework. The production shop supervisor will ensure the form indicates the material is in support of rework by annotating or stamping the word “rework” on the top margin of the form.

19.1.8.6.6.2. (Added) All 309 AMXG material associated with the rework process is ordered by the 709th Maintenance Support Squadron production support personnel as overhead material using U6800 or U6812 as the control number.

19.1.8.6.6.2.1. (Added) Expendable items normally ordered under cost code “A”, “L”, or “R”, will be ordered with control number U6800, cost code “L”.

19.1.8.6.6.2.2. (Added) Kits ordered under cost code “D”, and all expense material ordered under cost code “M” will be ordered with control number U6800, cost code “X”.

19.1.8.6.6.2.3. (Added) With investment or exchange material, use U6812 with same cost codes for those items normally procured as cost codes “B” or “G”.

19.1.8.7.7. (Added) 309 AMXG Rework Analysis.

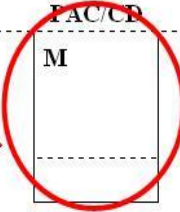
19.1.8.7.7.1. (Added) Analysts from the P&A section of aircraft or a management analyst from the back shop area will analyze the data and build monthly first time pass yield rate charts. The analyst will then submit charts and data to the squadron director or equivalent to be briefed at the monthly squadron team reviews.

19.1.8.7.7.2. (Added) The 309 AMXG/QPA QA analysts will provide all weapons system (A-10, C-130, F-16 and F-22) P&A section analysts with the first time pass yield rates for all RFD panel/area and paint inspections by the tenth working day of each month. The P&A analysts will incorporate RFD data into their first time pass yield rate charts.

19.1.8.7.7.3. (Added) Data is compiled into the PDMSS web, <https://apfemweb/mabr/Wdev/lms-athome.asp> via the depot data storage system. This is for both back shop, ITS, and aircraft, PDMSS. Information on MWR, ITS worksheet and the original documents can all be found on this website for research.

19.1.8.8. (Added) Other Than Re-Work WCD Documentation Requirements. WCD operations requiring further investigation but not considered rework will have a red circle placed around the inspection/certification block and an informational note placed within the task description block. The technician will then stamp and date within the task description block next to the informational note. (See Figure 19.1.9.)

Figure 19.1.9. (Added) Other Than Re-Work Documentation.

70	MXXXX	XXXX	XXX	XX	PAC/CD M
GRIND AXLE JOURNAL #1					
After initial grind corrosion pitting noted on SUFFICIENT TO CLEAN UP axle journal surface request E&I determination. 24 May 2004					
REF TO 4A4-72-3 TABLE 9-1 FIGURE 9-15					DATE

19.1.8.8.1. (Added) Any individual that signs off a red circle for a specific maintenance task must be PAC certified for the task. The individual that stamps and dates in the inspection code block with the red circle is indicating that the required maintenance or inspection requiring further investigation was performed and found the condition satisfactory.

19.1.8.8.2. (Added) The RCC that performed the required maintenance or inspection (repair, replace, within limits, etc.) will communicate the maintenance action to the RCC of the red-circled operation so the red-circle can be cleared. Notification may be accomplished through an X-coded task following the maintenance action.

19.1.9.1. (Added) Routes between organizations. The requesting organization can assist the tasked organization with the development of a WCD.

19.1.9.1.1. (Added) Maintenance tasks requiring a WCD will be attached to the applicable routing document when a route is required. When requested, a copy of the WCD will be attached to the routing document and provided to the organization receiving the item showing accomplishment of operations. See Table 19.1.7. for instructions on completing AFMC Form 137.

Table 19.1.7. (Added) Instructions for Completing AFMC Form 137, Routed Order (Project Directed).

BLOCK	DESCRIPTION
1	Aircraft serial number (see note 1)
2	Aircraft model, description and series (see note 2)
3	Production number (see note 3)
4	Quantity. Enter the number of items being processed with AFMC Form 137
8	Name of the document originator
9	Date document originated
16	Item serial number (if obtainable)
22	M-stamp number (or E-number if process performed is outside of PAC program). This will signify that portion of the route was completed. Numbers may be hand scribed or stamped but not pre-printed.
25	Flow days (if local directives require)
29	Completion date of routed process
28	Skill of support shop (if local directives require)
34	Date due (back to the user)

Unplanned Item: When the AFMC Form 137 document is not available for an item removed from a serial number, the following additional items must be taken	
NOTE 1	309 AMXG. Only The responsible ALS will be notified
NOTE 2	309 AMXG. Only The routed item listing should be researched to determine if the item is listed for the project under which the serial number is being processed
NOTE 3	309 AMXG. Only If the item is not a part of the negotiated package as determined by the MRT, but the item must be bench checked or have minor repair, a complete AFMC Form 137 will be hand-scribed.
NOTE 4	The hand-scribed AFMC Form 137 will be sent to the PAO along with other documentation identified for approval. If not approved, the hand-scribed AFMC Form 137 will be destroyed. In no case will an item have a hand-scribed AFMC Form 137 attached without PAO Approval.
NOTE 5	This form is available at: http://www.e-publishing.af.mil . When the document has been completed it will be attached to the item for which it was written. This will be accomplished by placing the AFMC Form 137 into a protective envelope/pouch. An AFMC Form 137 will not be used as a WCD.

19.1.9.2. (Added) Routed Item Production Count. Routed Items using AFMC Form 137 must be accompanied with a production and operation number for production count purposes.

19.1.9.3.1. (Added) WCDs for Indirect “S” JON cost class 4 (CC4) work. Organizations performing “S” JON CC4 work will use an approved WCD to document accomplishment of CC4 work. The WCD will be attached to the applicable routing document when a route is required. When requested, a copy of the WCD will be attached to the routing document and provided to the organization receiving the item showing accomplishment of operations. For additional information on CC4 work, refer to AFMCI 21-156.

19.1.9.3.1.2. (Added) 309 AMARG uses MAXIMO to document routed items for repair throughout the maintenance division and RCC support shops. The router WCD, along with the item, will be provided to the mechanic for certification of the task identified. When the job has been completed, the stamped WCD router and item will be returned to the initiating maintenance organization. The WCD router will be attached to the original core WCD.

19.1.9.3.1.3. (Added) 309 AMARG a WCD router must accompany the part or aircraft when separate support operations are accomplished concurrently with the master WCD. When all operations are complete, the technician will close the operations in workplace and return the stamped and dated WCD router to the requestor. The requester will attach the router WCD to the master WCD for audit and tracking purposes. On the master WCD write “Notes on Back” in block 17 of the routed operation. On the back of that page write, “OPN xx carried forward to attached router WCD”.

19.1.9.3.1.4. (Added) 309 AMARG for SBSS items, the DD Form 1348-1A, is routed to the wood mill and a copy is attached or copied on the WCD router. Wood mill will stamp and date WCD router but will not close operations when completed. Item and router will be sent to shipping for worker to stamp and date WCD router but will not close operations when completed. WCD router will be sent to the planner for attachment to the master WCD. Upon completion of the quarterly WCD, the scheduler will review operations, stamp and date the master WCD. 577 CRS routed items will use the original master WCD.

19.1.9.3.2. (Added) WCDs for support agreements. An approved WCD will be used for support agreement work. The WCD ensures proper control of all support work to include ensuring required maintenance actions are performed and to ensure return of the items to a final destination. The AFMC Form 137 will be attached to the WCD. When requested, a copy of the WCD will be attached to the routing document and provided to the organization receiving the item showing accomplishment of operations.

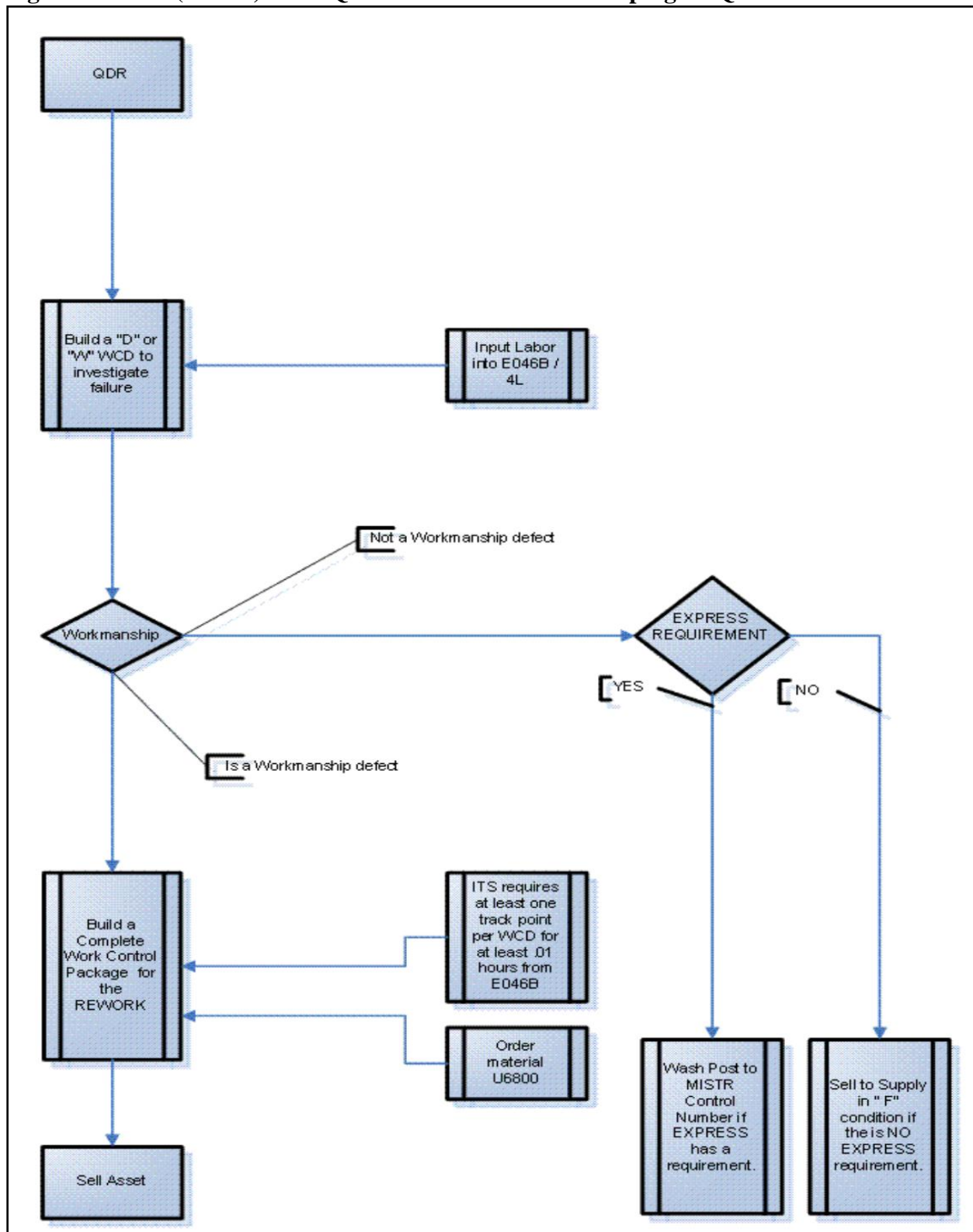
19.1.10. (Added) When requested, a copy of the WCD generated as the result of an authorized AFMC Form 206 will be attached to the routing document and provided to the organization receiving the item showing accomplishment of operations. For additional information on temporary work refer to AFMCI 21-156.

19.1.11. (Added) When a deficiency “G” JON is required for an active MISTR production item, the scheduler will contact the appropriate work loader for the work loader technician code, PCN, funds classification reference number to see if funding is loaded for the current quarter in the Defense Industry Financial Management System (DIFMS). ITS produced work scope or “W” documents are approved WCDs for deficiency investigation.

19.1.11.1. (Added) If there is not an established “G” JON, the planner will contact the work loader for a PCN and FCRN. The planner establishes an “Establish Work Authorization Non-MISTR (600D)” in the G004L.

19.1.11.2. (Added) See **Figure 19.1.10.** for ITS WCD for Product Quality Deficiency Report (PQDR) requirements flow chart. The WCD prefix format is group defined. The “D” suffix is the determining factor for earned hour accountability. If an “A”, “R”, “T” suffix is used, the time is indirect (2614 time).

Figure 19.1.10. (Added) ITS PQDR Flow Chart for Developing a PQDR WCD.



19.1.12. (Added) Condemned WCDs will be retained in an auditable file for a minimum period of 6 months per AFRIMS Table 21-5 Rule 1. WCDs associated with parts condemned prior to work documentation (no tasks started yet) may be destroyed and are exempt from retention.

19.1.12.1. (Added) The production supervisor and scheduler are required to stamp and date the WCD per the requirements identified in Chapter 2. (See Figure 19.1.11.)

Figure 19.1.11. (Added) Condemnation Documentation.

DATE PRINTED: 2005-02-11 DATE LAST ACT: 2004-3-13 DOC ID NBR: 23153A52A0025 EPS DOC NBR: MLGB93 5040 7592 JOHN R. DOE	WORK DOCUMENT 23153D ITN: 02912163	PAGE 1 OWNER: A DPC: MISTR
MOTOR GENERATOR		
Annotate "condemned" on WCD Header Page → CONDEMNED		
<hr/> <div style="display: flex; justify-content: space-between;"> <div> APPLICABLE TMS: PLANNED PART : MGH182-100 ACTUAL PART : QTY : 1 TYPE SERIAL NUMBER : TR1561 </div> <div> NOUN : MOTOR GENERATOR STK # : 6125009857950 STK LIST PRICE : WT: SIZE W= L= </div> <div> ERRC : PHC : </div> </div> <hr/>		

DATE PRINTED: 2005-02-11 DATE LAST ACT: 2004-3-13 DOC ID NBR: 23153A52A0025 EPS DOC NBR: MLGB93 5040 7592 JOHN R. DOE	WORK DOCUMENT 23153D ITN: 02912163	PAGE 3 OWNER: A DPC: MISTR
MOTOR GENERATOR		
50 MXXXX XXXX XXX XX PRETEST MOTOR GENERATOR TO DETERMINE CONDITION AND EXTENT OF REPAIR NECESSARY IAW 8C7-4-16-3	PAC CD <div style="border: 1px solid black; padding: 2px; display: inline-block;">M</div> <small>000</small> <small>3 APR 2004</small> DATE PAC CD	} Annotate "condemned" in task description block. Technician condemning item will date and stamp in applicable certification block. } No documentation is required for proceeding tasks since the item is "condemned".
60 MXXXX XXXX XXX XX DISASSEMBLE MOTOR GENERATOR IAW 8C7-4-16-3	PAC CD <div style="border: 1px solid black; padding: 2px; display: inline-block;">M</div> <small>000</small> <small>3 APR 2004</small> DATE PAC CD	
70 MXXXX XXXX XXX XX INSPECT MOTOR GENERATOR ARMATURE IAW 8C7-4-16-3 CONDEMNED BURNT WIRES	PAC CD <div style="border: 1px solid black; padding: 2px; display: inline-block;">M</div> <small>000</small> <small>3 APR 2004</small> DATE PAC CD	
80 MXXXX XXXX XXX XX BALANCE ROTOR ARMATURE IAW 8C7-4-16-3	M <small>000</small> <small>3 APR 2004</small> DATE PAC CD	
90 MXXXX XXXX XXX XX SOLDER LEADS IAW 00-25-234	<div style="display: flex; justify-content: space-around;"> <div> E <small>000</small> <small>3 APR 2004</small> DATE PAC CD </div> <div> MGT CD SP DATE </div> </div>	

19.1.13. (Added) Lost WCD. Anyone within 309 MXW finding a WCD, inadvertently misplaced or detached from the part and the part can't be located, will deliver the WCD to the appropriate scheduler for research. The scheduler will retain the WCD for a maximum of 90 days in order to try to locate the appropriate part.

19.1.13.1. (Added) If the part does not have a WCD, the supervisor or designee where the part is located will contact the scheduler. Production and scheduling will make every effort to locate the missing WCD.

19.1.14. (Added) Processing a soiled, torn, mutilated or otherwise damaged WCD that is unreadable. A new WCD will be initiated as a "Replacement or Duplicate WCD" with a recording of all legible stamp numbers and entries on the new WCD. These WCDs will be

returned to the applicable production shop foreman. Production shop foreman will determine appropriate action.

19.1.15. (Added) 309 AMXG Document and Data Control. Document and Data Control is an integral part of all production processes within the 309 AMXG/MXAZ. The document and data control requirements are mandated by the customer through specific workload requirements, process orders, technical data, and WCDs, as defined by the PPT. The policies and responsibilities established in the following section must be adhered to, to ensure strict control and accountability of documents and data received from the customer. The following section is restricted to those requirements, procedures and responsibilities of the 309 AMXG/MXAZ production and support personnel. This includes all matrixed personnel. These personnel are comprehensively documented and fall under this agency's jurisdiction.

19.1.15.1. (Added) The 309 AMXG/MXAZ will coordinate all initial document and follow-on changes with each customer and/or regulatory authority IAW work contract and regulatory requirements.

19.1.15.2. (Added) Documents required by the quality management system shall be archived on the locally established shared drive, (engineering/planner database) utilizing AFI 33-364, *Records Disposition, Procedures and Responsibility*.

19.1.15.3. (Added) 309 AMXG to approve documents for adequacy prior to use:

19.1.15.3.1. (Added) The customer under contract provisions will provide 309 AMXG/MXAZ a monthly listing of all applicable standards, specifications, drawings, engineering changes, and/or revisions.

19.1.15.3.2. (Added) Planning will receive the monthly data (customer) updates consisting of, but not limited to, applicable standards, specifications, drawings, engineering changes and/or revisions.

19.1.15.3.3. (Added) Upon receipt, planning will ensure all documents and/or data received from the customer is electronically cataloged/logged-in as it relates to the established workload. This must be done using the approved USAF, OO-ALC established database or locally created database supporting the existing customer workload.

19.1.15.4. (Added) 309 AMXG to review and update as necessary and re-approve documents:

19.1.15.4.1. (Added) The planner will coordinate with engineering to determine if the existing workload will be affected by newly obtained revisions and or changes in data specifications.

19.1.15.4.2. (Added) Together, engineering and planning will review the monthly (every 30 days) updates, and determine if customer supplied updates are relevant to current production efforts and workload requirements by verifying any possible changes to methodology or material.

19.1.15.5. (Added) 309 AMXG to ensure that changes and the current revision status of documents are identified:

19.1.15.5.1. (Added) If changes are to be implemented, planning will organize and manage a PPT which will consist of a planner, engineer, scheduler, production member and a quality assurance specialist. The PPT is responsible for reviewing customer supplied material/component standards, technical data, revisions, drawings and/or specifications and

deciding what actions will be taken and what revision or changes are to be implemented following instructions outlined in 309th Aircraft Maintenance Group Quality Plan and this chapter.

19.1.15.5.2. (Added) The PPT chair (planner) will notify the project manager to inform him/her of the costs and scheduling impacts of change implementation.

19.1.15.5.3. (Added) 309 AMXG. One of the following procedures will be followed depending upon the final decision of the customer and/or project manager:

19.1.15.5.3.1. (Added) If the customer agrees with the costs increase and scheduling impacts, and the 309 AMXG agrees to implement the revisions, then negotiations begin or the 309 AMXG will keep producing the items as is.

19.1.15.5.3.2. (Added) If revisions or changes do affect production and create a “work stoppage”, the planner will immediately coordinate with engineering, scheduling, and the program manager to communicate any concerns or issues to the customer in an effort to identify and help resolve the issue(s) on a case-by-case basis.

19.1.15.5.3.3. (Added) Production efforts will continue based on affectivities (effected serial numbers) of the revision/update.

19.1.15.5.4. (Added) Planning will ensure all the latest revisions are updated and highlighted in YELLOW in the Excel shared database to prevent the unintended use of obsolete documents and to apply suitable identification to them if they are to be retained for any purposes and that only the latest data is used to create WCDs and workload requirements. The new revision number and date of revision will also be annotated in the database.

19.1.15.5.5. (Added) Planning will ensure all changes to the relevant WCDs occur within 96 hours of notification and revisions, directions, or changes are electronically created and typed. Then documents will be distributed throughout the organization as required to accomplish the workload change.

19.1.15.6. (Added) 309 AMXG to ensure that relevant versions of applicable documents are available at points of use:

19.1.15.6.1. (Added) Planning will electronically update the planning office master 309 MXW established database or locally created database and physically (hard copy) update the core mill (production floor) logbook with the latest applicable, standards, specifications, drawings, engineering changes, and/or revisions.

19.1.15.6.2. (Added) Planning will make all changes to the relevant WCDs within 24 hours of notification.

19.1.15.6.3. (Added) If revisions affect the production efforts, planning and engineering will coordinate to identify all applicable revisions. Planning will then update the WCDs to reflect the current revisions.

19.1.15.7. (Added) 309 AMXG to ensure documents remain legible and readily identifiable, the Scheduler will make two copies of the accurate and completed work package; one for historical purposes and one for the customer. The scheduler will place one package into a jacketed dead-file for 2 to 7 years (unless customer contract dictates otherwise) and the other package will be attached to the end-item.

19.1.15.8. (Added) 309 AMXG Control of Records. Records will be established and maintained to provide evidence of conformity to requirements and of the effective operations of the quality management system. Records shall remain legible, readily identifiable and retrievable. A documented procedure shall be established to define the controls needed for the identification, storage, protection, retrieval time, and deposition of records. These records will be maintained for a specific period to be set by the customer.

19.1.15.8.1. (Added) These records can either be stored electronically in a database or physically stored in an archived file located in Building 238, production area upstairs mezzanine.

19.2.1. (Added) The 309 AMARG Workload Business Office (309 AMARG/OBW) will provide group planners with a RFQ to develop an estimate or a rough order magnitude as negotiated with customer and determined by work loader. The estimate will be valid for 90 days.

19.2.1.1. (Added) Critical Workload Characteristics refer to paragraph 19.1.5.8.3.5.

19.2.1.2.1. (Added) 309 AMXG Depot Field Team (DFT) Procedures. A DFT is an individual or group designated to perform maintenance and or inspection of systems or equipment at a place other than the organic depot.

19.2.1.2.1.1. (Added) When a DFT request is received; the respective weapon system should convene a DFT PPT meeting and determine the appointment of a DFT chief/lead as applicable. The DFT PPT shall include the appointed DFT chief/lead who will work together to establish a plan for the specific DFT requirements. The DFT PPT will develop all aspects of the plan including but not limited to the following:

19.2.1.2.1.1.1. (Added) WCD package.

19.2.1.2.1.1.2. (Added) Repair plan.

19.2.1.2.1.1.3. (Added) Listings of manning, tooling, material, equipment, and tech data requirements.

19.2.1.2.1.1.4. (Added) Personnel notification.

19.2.1.2.1.1.5. (Added) TDY requirement coordination with the travel office regarding number of people going TDY accommodations, rental cars, and travel requirements.

19.2.1.2.1.1.6. (Added) TDY requirements such as TDY address, host organization points of contact, pay, overtime, transportation, tool control, shipping, interim reporting, return procedures, safety concerns and any other related issues.

19.2.1.2.1.1.7. (Added) Provision of required information to the host unit to support the DFT.

19.2.1.2.1.1.8. (Added) Review of tasks and site for specific environmental issues.

19.2.1.2.1.2. (Added) When the DFT Team returns home the DFT chief/lead will debrief the DFT PPT and provide the package of completed WCDs. The DFT PPT will review the completed WCDs and file them the depot WCD dead file.

19.2.1.3. (Added) 309 AMARG. Informational notes required on the MAXIMO generated WCDs are indicated with “Notes on Back” in block 17. On the back of the page containing “Notes on Back” annotate the specific operation, the additional notes, stamp and date. When a mechanic has completed a maintenance task on the WCD, block 18 will always require a stamp

and date. When additional notes for that task are required, the mechanic will use “Notes on Back” procedures and also stamp and date on the back page of the WCD.

19.2.2.5. (Added) All 309 AMARG planners will conduct pre-production planning meetings for new work projects. The team will consist of a chairperson/lead planner or designee, representatives from production, scheduling, QA and if required, inventory control. Other organizations may attend as requested. 577 CRS is not required to hold pre-production/production planning team meetings for workload requests, but is required to convene pre-production meetings for all save list workloads. The PPT will document all meetings using the AFMC Form 500 and will maintain the worksheet on file for 1 year.

19.2.2.6. (Added) The following are minimum PPT WCD procedures:

19.2.2.6.1. (Added) 309 MXW PPTs shall use the AFMC Form 500 for all formal PPT reviews. The PPT worksheet will be maintained by the planner for WCDs electronically maintained in the IMPRESA, ITS, PDMSS and MAXIMO systems. Additionally, the PPT worksheet will be used for all electronically maintained AFMC Forms 959. Only the most recent PPT worksheet is required to be maintained by the planner. The following provides minimum requirements on when the formal PPT will use the PPT worksheet:

19.2.2.6.1.1. (Added) Use for developing new workload WCDs and reviews of contractor supplied WCDs.

19.2.2.6.1.2. (Added) Use for submitted WCD change requests affecting the form, fit, or function of an established process.

19.2.2.6.1.3. (Added) Use when a submitted WCD change request affects a critical task.

19.2.2.6.1.4. (Added) Use when initially determining WCD critical and IAW tasks

19.2.2.6.1.5. (Added) Use when a WCD task identifies a planned DT&S within the task description block.

19.2.2.7. (Added) Planners using ITS or IMPRESA will ensure a production supervisor WCD task is developed and inserted at the end of the WCD. The MGT/CD for this task will be “P”. The following or equivalent statement will be placed in the task description block: “Supervisor Review to Ensure All Tasks Are Properly Completed, Stamped and Dated. Technical Data Not Required”. (See Figure 19.2.1.)

19.2.2.8. (Added) Planners using ITS or IMPRESA will ensure a scheduler WCD task is developed and inserted after the supervisor review task of the WCD. The MGT/CD for this task will be “C”. The following or equivalent statement will be placed in the task description block: “Scheduler Review To Ensure All Required Certification Blocks Have Been Stamped and Dated. Technical Data Not Required”. (See Figure 19.2.1.)

Figure 19.2.1. (Added) ITS/IMPRESA Supervisor and Scheduler WCD Entries.

90				MXXXX		XXXX		690		YA		MGT/CD	
SUPERVISOR REVIEW TO ENSURE ALL TASKS ARE PROPERLY COMPLETD, DATED AND STAMPED												P	
TECHNICAL DATA NOT REQUIRED													
												DATE	
100				MXXXX		XXXX		690		YA		MGT/CD	
SCHEDULER REVIEW TO ENSURE ALL REQUIRED CERTIFICATION BLOCKS HAVE BEEN STAMPED AND DATED												C	
TECHNICAL DATA NOT REQUIRED													
												DATE	

19.2.3.4.1. (Added) Whenever a planner makes a change to a hardcopy WCD, the planner shall IET-stamp and date as close as possible to the change. (See **Figure 19.2.2.** and **Figure 19.2.3.**)

Figure 19.2.2. (Added) Planner Changes to Hardcopy WCD.

238K				NGGA		80		GTE11		TND03		6C		PAC/CD	
INSTALL HYDRAULIC DRIVE GEARSHAFT												M			
IAW 2G-GTCP36-11 SWP000-05 IAW 2G-GTCP36-11 WP 007															
000												DATE			
3 APR 2004															

Figure 19.2.3. (Added) Planner Changes to Hardcopy WCD.

40. No.		A1		00		IET		41. ENG TIME		42. ENG SERIAL		43. YRMFR		44. ENG MOS/TMS		45. TCCTO CODE		46. ALT OP NR															
1. DATE		2. SGL L		3. 0000		4. 0000		4A. FUND CD		5. STANDARD HOURS		6. TYPE		7. NO. WKRS		8. AREA		9. MAT		10. CONTROL NO.		11. JD		12. WORK CATEGORY DESCRIPTION		13. WK CAT CD		14. MAJ JOB		15. CREW CODE			
12/15/2003		AG		69150		69144		734		2		E		1		MA		M		06591		C		ACFT MAINT		036		CG					
16. MISSION DESIGN SERIES		17. ACFT SERIAL NO.		18. ACFT TIME		19. RESOURCE CONTROL CENTER		20. TY MA		21. STD RPTING DESG		22. DATE COMPLETED		23. WORK UNIT		24. ACT		25. WHEN DIS		26. HOW MAL		27. NO. UNITS		28. WK SPEC		29. INSP CODE		30. FAC CD					
		80000215				MXXXX		ME								14		NC		A		S		S		799		HH		M		1	
31. DESCRIPTION												32. ACTUAL HOURS				36. MECHANIC				37. PRODUCTION CERTIFIER													
INSTALL L/H SLAT ACTUATORS																																	
IAW TO 1A-10A-2-27JG-1 1A-10A-2-27JG-2												000				IET																	
31A. CORRECTIVE ACTION												34. DETAIL PLAN				38. QUALITY INSPECTOR				39. SCHEDULER													
												35. DELAY CODE																					
												TYPE				REASON																	

AFMC FORM 173 (COMPUTER GENERATED)

19.2.3.10. (Added) Planners may not identify tasks as PCW, or satisfactory as is (SAI). The maintenance technician/mechanic will inform the production supervisor or designee when a task is identified as PCW or SAI. The production supervisor or designee will notify the planner in-turn.

19.2.3.10.1. (Added) 309 AMXG planners will ensure an operation that is verified as NA or NR is deleted in PDMSS and/or G097.

19.2.4.9. (Added) P-stamp and date completed WCDs as confirmation of supervisory review prior to turn in to the production controller/scheduler. WCDs will be stamped/dated in the upper right hand corner except ITS and IMPRESA WCDs which will contain a task identified with a MGT/CD of “P” for this purpose.

Figure 19.2.4. (Added) P-Stamp WCD Review.

90	MXXXX	CEL03	690	YA	MGT/CD
SUPERVISOR REVIEW TO ENSURE ALL TASKS ARE PROPERLY COMPLETED, STAMPED AND DATED					<div style="border: 1px solid black; padding: 5px; text-align: center;"> P P 000 </div>
NO TECHNICAL DATA REQUIRED					
					<div style="border: 1px solid black; padding: 2px;"> 7 APR 2004 DATE </div>

19.2.4.9.1. (Added) The review of multiple WCDs by the production supervisor and scheduler may be accomplished under one specific WCD. This specific card will, at a minimum, identify (1) a work category description, (2) the resource control center, (3) what’s being reviewed with the statement, “All certification blocks have been properly stamped and dated”. The “X” inspection/certification code will be used for this purpose. (See Figure 19.2.4. and Figure 19.2.5.)

Figure 19.2.5. (Added) Using NA, NR, PCW, or SAI.

60	MXXXX	1208	690	MB	PAC/CD
INSTALL HYDRAULIC PUMP ADAPTER					<div style="border: 1px solid black; padding: 5px; text-align: center;"> M 000 NR </div>
IAW 2G-GTCP36-12 WP 009					
<i>Received new hydraulic pump from supply and adapter was preassembled onto pump</i>					<div style="border: 1px solid black; padding: 2px;"> DATE </div>
<div style="text-align: center;"> 3 APR 2004 </div>					

19.2.5.1. (Added) 309 AMARG the maintenance technician or mechanic will document time and close any "SAI" or "PCW" operation in workplace for the time required to validate.

19.2.5.1. (Added) 309 AMXG the use of NR, NA, PCW, or SAI will require planning concurrence.

19.2.5.1.1. (Added) Trainee stamping of WCDs. Personnel not certified on the task being performed can accomplish the work if they are qualified to the extent necessary and are under the guidance of a PAC certified mechanic or technician. A technician not yet certified on a task can stamp and date the WCD task outside any certification block. At no time will a trainee stamp inside certification blocks unless they are PAC certified on that specific WCD task. A certified technician will stamp and date inside the applicable certification blocks. (See Figures 19.2.6.–19.2.8.) for trainee stamping.

Figure 19.2.6. (Added) WCD Trainee Stamping

843	MXXXX	40	238W	GTE27	YE	PAC/CD	M	M	Certified Technician Stamp
PERFORM AIR LEAK TEST						Trainee Stamp →	M 000 3 APR 2004 DATE	M 000 3 APR 2004 DATE	
IAW 2G-GTC85-33-10 WP 004 00									
843	MXXXX	40	CEL03	690	YE	PAC/CD	I	M	MGT/CD
HI-POT/RESISTANCE CHECK OF STATOR						Trainee Stamp →	M 000 3 APR 2004 DATE	M 000 3 APR 2004 DATE	M 000 3 APR 2004 DATE
IAW 8A6-5-8-3									
						Certified Technicians Stamp			

Figure 19.2.7. (Added) WCD Trainee Stamping

40. No.		41. ENG TIME		42. ENG SERIAL		43. YR/MR		44. ENG MOS/TMS		45. TCTO CODE		46. ALT OP NR		
A1														
1. DATE	2. SKIL L	3. OP NO.	4. WPN ID	4A. FUND CD	5. STANDARD HOURS	6. TYPE	7. NO. WKRS	8. AREA	9. MAT	10. CONTROL NO.	11. JD	12. WORK CATEGORY DESCRIPTION	13. WK CAT CD	14. MAJ JOB CODE
12/15/2003	AG	69144	734		2	E	1	MA	M	06591	C	ACFT MAINT	036	CG
16. MISSION DESIGN SERIES	17. ACFT SERIAL NO.	18. ACFT TIME	19. RESOURCE CONTROL CENTER	20. TY MA	21. STD RPTING DESG	22. DATE COMPLETED	23. WORK UNIT	24. ACT	25. WHEN DIS	26. HOW MAL	27. NO. UNITS	28. WK SPEC	29. INSP CODE	30. FAC CD
0A10734	80000215		MBAAP	ME				14	NC	A	S	S	799	HH M 1
31. DESCRIPTION						32. ACTUAL HOURS		36. MECHANIC		37. PRODUCTION				
INSTALL L/H SLAT ACTUATORS						M 000 3 APR 2004 Trainee Stamp		M 000 3 APR 2004 Certified Technician Stamp						
IAW TO 1A-10A-2-27JG-1								33. DRAWING NO		38. QUALITY INSPECTOR		39. SCHEDULER		
31A. CORRECTIVE ACTION						34. DETAIL PLAN		35. DELAY CODE						
						TYPE		REASON						

AFMC FORM 173 (COMPUTER GENERATED)

Figure 19.2.8. (Added) WCD Trainee Stamping

DCD: C130H		WPN ID: 734		SERIAL NO: 64001234		OP NR: 69144		CTL NR:06591	
Sub Op	Description	Insp	Mech	Pro Cert	Other/Insp				
00010	TORQUE LOWER TRACK SHOE MOUNT BOLTS IAW TO 1C-130H-2-32JG-10-1	M	M			Certified Technician(s) Stamp			
		Trainee Stamp →	M 000 3 APR 2004	M 000 3 APR 2004	M 000 3 APR 2004				
00020	PERFORM FO INSPECTION								

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19.2.5.1.2. (Added) Explanation Codes. When a task is marked with NR, NA, PCW, or SAI on a WCD, the mechanic may also enter in the task description block an explanation code identified in Table 19.2.1 (309 AMARG will use “Notes on Back”). Explanation codes may be

used as informational notes eliminating the requirement to “spell out” the explanation. E&I personnel are also allowed to identify explanation codes, dating, and E&I stamping in the task description block.

Table 19.2.1. (Added) Explanation Codes

Code	Description
ENI	Equipment Not Installed
NASN	Not Applicable Serial Number
NBNC	Noted But Not Corrected
NCW	Not Complied With
NPR	Not Project Related
NRTS	Not Repairable This Station
NS	Not Supportable

19.2.5.3. (Added) The 309 AMARG will use the date format YYYYMMDD when stamping and dating the WCD.

19.2.6.4. (Added) 309 AMARG route all WCDs regarding aircraft maintenance, to include copies of AFTO Form 781, to QPQL Aircraft Records to be kept in the hold back file IAW Chapter 20, paragraph 20.1., Aircraft and Other Assets Records Processing and Storage.

19.2.6.7.1. (Added) 309 AMARG receives over and above WCDs from planning and incorporates workload into project schedules.

19.2.6.7.2. (Added) 309 AMARG if back shop support is required at the aircraft, the project scheduler will generate a dispatch order and forward it to the back shop scheduler. If the asset is removed from the aircraft and routed for repair, the project scheduler will attach the WCD to the asset and forward to the back shop scheduler. When completed, the back shop scheduler will ensure the routed WCD is returned to the project scheduler.

19.2.6.8. (Added) The 309 AMARG scheduler will C stamp and date in block 19 on the WCD.

19.2.6.9. (Added) 309 AMARG schedulers will ensure MAXIMO work order tracking screen reflects accurate status and progress of work orders.

19.2.6.9.1. (Added) Schedulers will ensure all operations have a completion date entered in MAXIMO work order tracking screen before the work order status is changed to complete.

19.2.6.9.2. (Added) Operations that are not required or not applicable will have a completion date entered in the MAXIMO work order tracking screen and “not required” or “not applicable” entered in the remarks section.

19.2.6.9.3. (Added) The Lead or process scheduler from each division is responsible for notifying the MAWW master scheduler and appropriate work loader when all WCDs are completed for a given sales order. The master scheduler and/or work loader will confirm no further work orders will be required on the sales order and confirm sales order closure with the budget office.

19.2.6.9.4. (Added) Work orders inactive for more than 30 days will reflect a status in MAXIMO explaining the reason for delay.

19.2.6.10. (Added) ALS AFMC Form 202 Issuance Procedures.

19.2.6.10.1. (Added) The dock ALS, as the focal point and responsible agent for the issuance of WCDs, will attach the completed AFMC Form 202 approved by engineering to all required operations. This process will be accomplished prior to scheduling or issuing the WCD for work on the affected aircraft.

19.2.6.10.2. (Added) If an AFMC Form 202 addresses more than one skill, the responsible ALS will ensure a copy of the AFMC Form 202 is attached to the WCD for each skill prior to being scheduled and issued for work.

19.2.9. (Added) Examination and Inventory (aka Evaluation and Inspection).

19.2.9.1. (Added) 309 AMXG: E&I technicians determine what unpredictable write-ups are required, consistent with work specification requirements and, as required, the E&I technician will complete an MWR worksheet identifying unpredictable defects for input into PDMSS. CMXG: E&I technicians will determine what processes are required for back shop repair. If a CMXG E&I technician identifies a process is not required, the E&I technician will follow the procedures contained in paragraph 19.2.5.1 of this chapter and properly document the WCD task(s) as NA, NR, PCW, or SAI.

19.3.1.7. (Added) Process orders will not:

19.3.1.7.1. (Added) Contain technical data taken verbatim from TOs except when doing so would provide a solution to work being accomplished in areas where multiple TOs are required but is not practical.

19.3.1.7.2. (Added) Be used in place of the TO change request process outlined in TO 00-5-1. Use an AFTO Form 22 to request new maintenance instructions or procedures when the proposed new process may benefit other ALCs.

19.3.1.7.3. (Added) 309 CMXG be at variance with, or change standards, parameters, or tolerances of verified technical data as authorized by TO 00-5-1 and this instruction.

19.3.2. (Added) Local procedures for preparation, control, monitoring, distribution, and deletion of all process orders begin at paragraph 19.3.3.

19.3.2.1.1. (Added) In addition to the mandatory coordination and signature requirements, any other endorsement line added to Block 11 will be considered mandatory for coordination. Block 11 will be used to document review concurrency.

19.3.2.1.2. (Added) The process order OPRs will:

19.3.2.1.2.1. (Added) Determine what organizations possess the expertise necessary to write the process order, and obtain the services of that organization to aid in writing the process order.

19.3.2.1.2.2. (Added) Work with the organizations that will use the process order to determine that the process order meets the needs of the user and the capability exists to accomplish the operations described.

19.3.2.1.2.3. (Added) Resolve any conflicts or others issues that arise during preparation, coordination, or use of the process order.

19.3.2.1.2.4. (Added) Subscribe to the daily TO distribution list as provided by the TODO, and review the distribution list regularly to determine if TO changes affect process order under their control.

19.3.2.1.3. (Added) 309 MXSG process order requirements (i.e. inspection areas, critical areas, accept/reject criteria, frequency) are determined by the appropriate engineering organization (owning engineer of the item/part requiring inspection), with the assistance of the physical sciences squadron (309 MXSG/MXRL).

19.3.2.2. (Added) If a process order contains verbatim TO information, the review will be accomplished before the end of the month in which its review is due.

19.3.2.3. (Added) The engineering organization will complete the review no later than 15 calendar days after formal posting of the technical data change.

19.3.2.4. (Added) AFMC Form 561 Block 10 will contain the name of the assigned 309 AMXG project and project number (when available) and the date reviewed. This date will be the date the process order was reviewed with no major changes. This date will be removed if a major revision takes place and the process order has been re-coordinated.

19.3.2.5. (Added) In the event that changes are made that replace primary procedures, alter the purpose, or add new procedures not previously contained in the process order, the process order must be coordinated for review.

19.3.2.6.1. (Added) When properly coordinated and authenticated, process orders will be binding on all affected organizations. The effective date in Block 6 will be the date the process order becomes binding. This will be the same date as the date in Block 13.

19.3.2.6.2. (Added) 309 CMXG engineering, planning, and production groups affected by the process order will be listed in the process order information sheet in the *Process Order Development and Display System* (PODDS) system.

19.3.3. (Added) Process Order Requests.

19.3.3.1. (Added) When the need for a process order is determined, production supervision will contact the planner over the item/part/process to request development of a process order.

19.3.3.2. (Added) The planner will ensure a PPT is formed. The PPT will be comprised of but not limited to:

19.3.3.2.1. (Added) The planner who will chair the PPT.

19.3.3.2.2. (Added) Production supervisor or designee from the section where the work will be accomplished.

19.3.3.2.3. (Added) Owning item manager/engineer of the item/part/process under consideration.

19.3.3.2.4. (Added) Quality Assurance (as needed).

19.3.3.2.5. (Added) 309 MXSG Physical Sciences Squadron Laboratory NDI Level III.

19.3.4. (Added) Process order preparation.

19.3.4.1. (Added) All 309 MXW groups using the AFMC Form 561 will prepare process orders according to AFMC Attachment 19. Groups utilizing PODDS will follow the procedures beginning in paragraph 19.3.4.2.

19.3.4.2. (Added) PODDS.

19.3.4.2. (Added) All 309 CMXG process orders shall be written, maintained, controlled and published electronically in PODDS.

19.3.4.2.1. (Added) Process orders in PODDS may contain electronic pictures, diagrams, video, tables or other forms of media that help explain correct processing methods. Any media used in PODDS shall be controlled as technical data.

19.3.4.2.2. (Added) The PODDS manager creates a blank process order for the part that includes the specific part number and TO references. If necessary, a new Master Process Order will be created at this time. A data input technician (DIT) will be chosen and assigned to the new process order at this time. The DIT could be an engineering technician, a contractor, someone from the shop floor, or the process engineer.

19.3.4.2.3. (Added) The DIT notifies the relevant production supervisor that a process order is being written, and then documents the details (who, what, when, where, why, etc.) of the process. Procedure documentation may include pictures, video, or other media as necessary to fully capture the information required. Any steps that are critical to the operation must be identified.

19.3.4.2.4. (Added) After completing the documentation of the process order, the DIT, with the assistance of the operator as needed, will verify that the operation completed is acceptable per TO criteria. If the process is acceptable continue to the next step. If the operation completed is not acceptable contact process engineering.

19.3.4.2.5. (Added) Input documented procedure into PODDS.

19.3.4.2.6. (Added) Send the documented procedure in PODDS to the responsible engineer for review and modification.

19.3.4.2.7. (Added) The DIT will make any final changes, and then release the process order to the responsible groups for final approval and subsequent publication.

19.3.4.2.8. (Added) All engineering, planning, quality, and production functions affected by the process order will be listed on the process order information screen in PODDS. Process orders in PODDS are available to anyone with secure internet access at Hill AFB.

19.3.4.2.9. (Added) 309 CMXG the operator, the DIT, and the wage leader will be responsible to see training is given to all operators performing that operation, as needed.

19.3.4.3. (Added) Process order numbering.

19.3.4.3.1. (Added) 309 AMARG process orders will be numbered in block 3 as follows: year, originator's office symbol, and consecutive serial number (i.e. 07-AMRS-001).

19.3.4.3.2. (Added) The 309 AMXG process order number is made up of six to eight digits. The first digit is an alpha character representing the organization, the second digit is a single numeric character representing the calendar year, the next three digits represent the Julian date,

the last one or two digits will be numeric characters representing the number of process orders issued on that date.

19.3.4.3.3. (Added) 309 CMXG process orders are numbered by PODDS. PODDS uses MPOs which are assigned a three to four digit alpha-numeric abbreviation representing a specific work center or process. MPOs are sorted by repair facility in PODDS, and may be sub-identified using a four digit sequential process order identifier.

19.3.4.3.4. (Added) 309 EMXG and 309 MMXG. The process order number is made up of nine to ten digits. The first, second, and third digits are alpha characters representing the organization (i.e. 'EAB' for 309 EMXG/MXVEAB organization). The third digit may be 'X' if the process order is to apply to more than one RCC. The fourth and fifth digits are a two-digit number representing the calendar year. Digits six, seven, and eight represent the Julian date. Digits nine and/or ten will be numeric, representing the number of process orders issued on that date. For example, the process order number EAB0420803 was the third process order created on 27 July 2004 for 309 EMXG/MXVEAB.

19.3.4.3.4.1. (Added) The numbering system for 582 MMXS/MXDTA process orders consists of eleven characters in the following manner: MXDTA-PO-91-XXX. The last three digits designate the area of primary use for process order: 500 series designates process orders used in the physical and chemical properties laboratories, 600 series designates process orders used in the propellant and explosives machine shop, 700 series designates electrochemical milling and other operations at the Little Mountain site, 800 series designates process orders used at the Oasis ICBM dissection facility, and 900 series process orders are used for functional testing of munitions and explosive items. A two-digit code designating the last two digits of the calendar year may be added as a suffix to the process order resulting in a process order number such as MXDTA-PO-91-XXX-XX.

19.3.4.3.5. (Added) 309 MXSG process order number is made up of eleven digits. The first four digits are an alpha character representing the owning organization of the part. The fifth and sixth digits are numeric characters representing the calendar year. The seventh through ninth digits represent the julian date. The tenth and eleventh digits represent the sequence number for that date (i.e. MMXG0623301).

19.3.5. (Added) Process Order Distribution.

19.3.5.1. (Added) All approved process orders will be posted on the Alexandria Handbook accessible through the AFMC Logistics Information Portal (<https://ooport.hill.af.mil>). A link to PODDS will be located in on the Alexandria Handbook in place of the group process order folder for groups using PODDS.

19.3.5.2. (Added) The OPR of a process order is responsible to deliver the process order to Alexandria Handbook website manager for input into the Alexandria Handbook. When a new or revised process order has been placed on the Alexandria Handbook, the process order OPR will send notice via email to the appropriate workload support planner that the process order is binding and available. The notice will include the process order number, title, and revision or review date.

19.3.6. (Added) Process Order Control.

19.3.6.1. (Added) The words “TECHNICAL DATA EXTRACT WHEN PRINTED” and the date printed will be included in the header or footer of all process orders. Hard copies will be considered technical data extracts. (See paragraph 19.1.2.1.)

NOTE: (Added) Process orders containing the statement, “UNCONTROLLED DOCUMENT WHEN PRINTED” are obsolete and should be removed from production areas.

19.3.7. (Added) Rescinding Process Orders.

19.3.7.1. (Added) A request to rescind a process order may be accomplished by anyone in 309 MXW by informing the process order OPR and providing the reason the for rescission. The OPR will coordinate the request through the same organizations that originally approved the process order. This process may be accomplished via email. The process order will be rescinded on approval by all concerned organizations.

19.3.7.2. (Added) When rescinding a process order, the OPR will send notice that the process order has been rescinded via email to the appropriate workload support planner, the Alexandria Handbook webmaster, and other key personnel in the same organization as needed.

19.3.8. (Added) PPO STINFO Markings.

19.3.8.1 (Added) Distribution statement: If the PO is tied to a TO, use the same distribution statement as the TO. If the PO is tied to more than one TO, use the most stringent distribution statement among the TOs. If the PO isn’t tied to a TO or other documents already incorporating a distribution statement, refer to [AFI 61-204, Disseminating Scientific And Technical Information](#), Para 1.2.1. and 2.1.1. and [T.O. 00-5-1](#) Para 2.12.3.3. and Appendix E to determine and assign the applicable distribution statement.

19.3.8.2. (Added) Export Control Warning: use "WARNING--Export-Controlled."

19.3.8.3. (Added) Destruction Notice: use, "DESTRUCTION NOTICE--Destroy by any method that will prevent disclosure of contents or reconstruction of the document."

19.4.1. (Added) Every stamp impression on WCDs will be independently dated with the actual date the stamp impression was made.

19.4.1. (Added) 309 MMXG issuance of maintenance stamps will only occur after the employee has completed applicable training as designated in this instruction and AFI 36-2232. In addition, a mechanic being issued an M stamp must be certified in at least one task.

19.4.1.1.1.1. (Added) The 309th Maintenance Wing maintenance groups (309 AMXG, 309 AMARG, 309 CMXG, 309 EMXG, 309 MXSG, 309 MMXG) are responsible for the issue, control and inventory of all maintenance stamps within their respective organizations. A primary and alternate stamp manager shall be assigned in writing by each organization. Oversight is provided by the 309 MXW Quality Assurance/Process Improvement Office.

19.4.1.1.1.2. (Added) The 309 EMXG PMEL shall be responsible for the issue and control of all K-stamps issued to personnel who repair, calibrate and certify test measurement and diagnostic equipment, IAW TO 00-20-14, *Air Force Metrology and Calibration Program*, and the PMEL Quality Manual or the contract Statement of Work. K-Stamps are not used on WCDs and are not considered maintenance stamps as defined in this instruction. All other maintenance stamps required by the PMEL shall be issued, controlled, and inventoried through the 309

EMXG. Annual auditing of all maintenance stamps and organic K-stamps will be conducted under the 309 EMXG with a copy forwarded to PMEL.

19.4.1.1.1.3. (Added) Support Center Pacific, Kadena AB, Japan (525 EMXS) will maintain a supply of maintenance stamps, issued from 309 EMXG. The designated representative will issue and control all stamps in 525 EMXS.

19.4.1.1.1.3.1. (Added) 525 EMXS is responsible for issue and control of any maintenance (N) stamp issued to the 18th Equipment Maintenance Squadron, Kadena Air Base, Okinawa, Japan. This will facilitate the performance and documentation of NDI inspections in the absence of the assigned 525 EMXS NDI technician.

19.4.1.1.2.1. (Added) Requests for maintenance stamps shall be initiated by the employee's supervisor via e-mail or in writing to the organizational stamp manager.

19.4.1.1.2.2. (Added) Issue of maintenance stamps will only occur when the employee's PAC/SS Standard System record shows completion of applicable training as designated in section **14.54** of this instruction.

19.4.1.1.2.2.1. (Added) An "M", "P", or "Q" stamp will not be issued until the employee has completed all mandatory training.

19.4.1.1.2.2.2. (Added) 309 EMXG employees must be a minimum of a WG-05, or provide a copy of their certificate of completion for electronics technicians student program. This certificate will be maintained by the PAC stamp manager; a copy will be also be maintained by the shop supervisor.

Table 19.4.1. (Added) 309 AMXG Stamp Issue Prerequisite Training

Initial Requirement Training Courses
Work Control Documents
Tool Control and Accountability Program
Technical Data Use and Compliance (F-22 Exempt
Fire Safety and Prevention Training
FOD/DOP Awareness Training

Table 19.4.2 (Added) EMXG Stamp Issue Prerequisite Training

Initial Requirement Training Courses
Electro-Static Discharge Awareness
Work Control Documents
Tool Control and Accountability Program
Technical Data Use and Compliance
Aerospace Corrosion Prevention and Control
Fire Safety and Prevention Training
FOD/DOP Awareness Training

Table 19.4.3 (Added) CMXG Stamp Issue Prerequisite Training

Initial Requirement Training Courses
Lockout / Tagout Procedures
Work Control Documents
Tool Control and Accountability Program
Technical Data Use and Compliance
Aerospace Corrosion Prevention and Control
Fire Safety and Prevention Training
FOD/DOP Awareness Training

19.4.1.1.2.3. (Added) Organizations shall use the Hill AFB TSS, Stamp module to issue, record, track, control and identify maintenance stamps. This database shall include un-issued stamps.

19.4.1.1.2.4. (Added) Revocation of a maintenance stamp shall only occur at squadron or flight level within the respective organization. Outside agencies can only recommend a stamp be revoked. The maintenance stamp shall be returned to the organizational stamp manager.

19.4.1.1.2.5. (Added) Recall actions of maintenance stamps initiated by the organizational or wing stamp manager, shall be coordinated through the appropriate squadron/flight.

19.4.1.1.3.1. (Added) Requests for maintenance stamps must include: Employee name, office symbol, type of stamp, supervisor's name and phone number and date of request.

19.4.1.1.3.2. (Added) Issued stamps shall be accounted for on an AF Form 1297, (309 AMARG may use stamp request letter in place of AF Form 1297). Stamps shall be issued as two line items to include stamp and cap. Obsolete or previously used forms do not need to be re-accomplished. Documentation of un-issued stamps shall be maintained on the annual inventory summary and organizational database. Turned in maintenance stamps shall not be reissued to another individual for a minimum of 90 days from the date of turn in.

19.4.1.1.3.2.1. (Added): Maintenance stamp caps shall be marked with the stamp number of the issued stamp by the most suitable method (i.e. etching, lasered, or permanent marking pen) when issued. Caps shall be inspected by the employee and re-marked as needed.

19.4.1.1.3.3. (Added) Individuals retiring, separating or being reassigned to a position in a different organization, or to a position no longer requiring a stamp, shall turn in their assigned stamp to the organizational stamp manager.

19.4.1.1.3.4. (Added) Lost maintenance stamps or caps shall be reported and documented IAW lost item procedures in Chapter 10 of this instruction. Lost stamp or cap information, including the AFMC Form 310, control number, shall be maintained in organizational stamp databases for a minimum of 3 years. Once a stamp is reported lost, the stamp number shall not be reissued for 1 year from the date lost. A stamp reissue request from the assigned supervisor shall be required prior to another stamp being issued. When caps only are lost, a replacement cap will be issued without re-issue of a new maintenance stamp after compliance IAW all FOD procedures.

19.4.1.1.3.5. (Added) 309 AMARG a replacement stamp will be re-issued using the 'replacement tool authorization/option' of the AFMC Form 310. The employee will sign and date acceptance of the replacement on the AFMC Form 310, a copy will be maintained by the stamp manager as the issuing document.

19.4.1.1.3.6. (Added) Annual maintenance stamp inventory documentation shall be kept on file by organizational stamp managers until replaced by the following year's inventory.

19.4.1.1.4.1. (Added) Organizations shall conduct an annual maintenance stamp inventory including un-issued stamps. A summary of the results shall be forwarded to 309 MXW Training Flight (309 MXW/OBMT) upon completion.

19.4.1.1.4.2. (Added) An annual inventory summary shall include as a minimum, total number of stamps assigned by type with a status of active/in use, lost, destroyed, or un-issued. Stamps not reconciled with the inventory shall include a status, i.e., deployed active duty, TDY, illness. Non-reconciled stamp(s) shall be cleared from TSS Stamp Manager Open Audits module when the new completed audit has shown stamp(s) is/are in the same status from the previous annual audit.

19.4.1.1.4.3. (Added) Deficiencies discovered during the annual inventory shall be reconciled and updated with the TSS/PAC stamp database.

19.4.1.1.4.4. (Added) Once a new group annual audit has been launched, all prior open annual work center audits with non-reconciled stamps will be closed. Explanation should be added to the comments section of the non-reconciled stamp to note carry over to next audit.

19.4.1.1.4.5. (Added) The following procedures shall be followed to accomplish annual maintenance stamp inventories:

19.4.1.1.4.5.1. (Added) Organizational stamp managers shall provide stamp inventory listings to all appropriate flights. These listings shall contain employees' names and maintenance stamp number(s).

19.4.1.1.4.5.2. (Added) The supervisors shall have the employees place their stamp impressions next to the stamp number on the stamp inventory listing. The supervisor shall inspect the stamp impression to ensure it is the correct number and is legible, and that the maintenance stamp cap is marked with the issued stamp number. Any discrepancies shall be noted, the supervisor shall

sign and date the completed stamp inventory listing and forward it to the organizational stamp manager.

19.4.1.1.4.5.3. (Added) Group/squadron commanders shall ensure all stamp inventory listings are returned. Organizational stamp managers shall ensure all entries are stamped, and each stamp inventory listing is signed by the responsible supervisor.

19.4.1.2. (Added) 309 MMXG geographically separated units (GSU) located at 309 MMXS/MXNN Rivet MILE operations at Malmstrom AFB, MT; Minot AFB, ND; F.E. Warren AFB, WY, and Det. 41, Vandenberg AFB, CA will maintain a supply of maintenance stamps, issued from 309 MMXG. The designated representatives will issue, control, and inventory all stamps.

19.4.1.2.1. (Added) The 309 MXW stamp program authorizes thirteen different stamps for use by personnel in accomplishing their assigned functions.

NOTE: There are stamps in the 309 MXW stamp program that are not “maintenance stamps” for the purpose of this instruction and will not be used to certify WCD tasks. Stamps are for the exclusive use of personnel to whom they are issued and shall not be used by any other individual for any reason. Stamps M, N, P, IET, C, MRT, and Q have mandatory issue and use requirements. Additional stamps issued are D, EI, INERT, K, T, U. It is not expected or required that organizations shall use or issue all fourteen different types of stamps. An organization has the right under this supplement to issue only stamps in their assigned blocks.

19.4.1.2.2. (Added) 309 MXW stamp number block assignments are designated in Table 19.4.4.

Table 19.4.4. (Added) 309 MXW Stamp Number Block Assignments

ORG.	M	P	Q	IET	C	D	U	N	T	K	EI	MRT	INERT
AMXG	00041-02500	0001-0500	226-400	0001-0199	0001-0150	0001-0100	001-010	600-609			001-100	001-025	
AMARG	001-950	001-150	001-015	001-050	001-036			001-025					001-006
CMXG	70000-72500	5000-5500	501-551	200-299	600-725		700-799				600-775		
MXSG	04000-05000	0700-0800	800-900	0700-0800	0800-0900			001-100	5080-5100		776-800		
EMXG	90000-91050	4000-4200	1000-1100	0300-0399	0300-0400			891-900					
EMXG PMEL										151-300			
MMXG	03000-03999	2000-2200	100-150	400-499	500-599			501-510					

19.4.1.3.1. (Added) For 309 MMXG GSU employees not required to be in PAC, supervisors will certify that the required training has been completed and at least one task has been certified.

19.4.1.3.3.1. (Added) 309 AMARG P-stamp will not be used to certify completion of maintenance accomplished on a task or product.

19.4.1.3.3.2. (Added) 309 MMXG Temporary issuance and use of P-Stamped is authorized for non-production supervisors and their designated representatives when conducting a 100 percent review of each task on each work control document opened and in use. To certify the completion of the oversight, the non-production supervisor or their designated representative, will "P" stamp the top right hand corner of the AFMC Form 500. Stamps will be turned in to the group stamp manager when the 100 percent task review is completed.

19.4.1.3.3.3. (Added) P-Stamped may be issued to supervisors and/or designated alternate at the discretion of the group.

19.4.1.3.5.1. (Added) Issued to production schedulers who verify that WCDs have been completed and all time has been taken. The scheduler reviews, stamps and dates the completed WCDs to ensure all required certification blocks have been stamped and dated.

19.4.1.3.7. (Added) MRT and PAO are accomplished electronically and do not physically exist. Refer to paragraph 19.1.5.5.2.2 on MRT and PAO stamp requirements during a work emergency situation.

19.4.1.3.7.1. (Added) MRT stamps are issued to 309 AMXG forms and records personnel to denote accomplishment of X-coded tasks on WCDs.

19.4.1.4.1. (Added) (E&I) Issued to evaluators and inspection personnel to authorize work for back-shops.

19.4.1.4.2. (Added) (D) Aircraft Examination & Inventory Stamp: Issued to inspectors who perform an incoming inspection on the various weapon systems after the aircraft has been prepped for depot maintenance.

19.4.1.4.3. (Added) (U) Delta Stamp. Issued to qualified maintenance personnel to:

19.4.1.4.3.1. (Added) Identify Air Force property on condition tags or labels if another type of maintenance stamp has not been issued. All other 309 MXW maintenance stamps may be used to stamp condition tags or labels.

19.4.1.4.3.2. (Added) Identify work to be accomplished on components by certified mechanics other than E&I personnel.

19.4.1.4.4. (Added) 309 AMARG Inert stamp. Issued to qualified and certified egress/armament section personnel and used to certify inert explosive items. INERT stamps will not be used on WCDs.

19.4.1.4.5. (Added) 309 MXSG (T) Test Stamp. Issued to technicians in the 309th Maintenance Support Group (309 MXSG) who test wire-crimping tools for serviceability. T stamps will not be used on WCDs.

19.4.1.5. (Added) See Table 19.4.5. for samples of all 309 MXW maintenance stamps.

Table 19.4.3 (Added) 309 MXW Stamp Examples

Maintenance	Non-Destructive Inspection	Production Supervisor	Evaluation & Inspection	Quality Assurance	Production Control (Scheduler)
Industrial Engineering Technician (Planner)	Examination & Inventory	Tool Testing and Certification	Delta	Maintenance Review Team	PMEL Calibration (K-Stamp)
Maintenance (AMARG)	Non-Destructive Inspection (AMARG)	Production Supervisor (AMARG)	Quality Assurance (AMARG)	Production Control (AMARG)	Industrial Engineering Technician (AMARG)
INERT (AMARG)					

19.4.1.6. (Added) Authorized maintenance stamp users shall correct their stamping and dating errors by writing “VOID” in red across the error. The correct information will be entered and stamped/dated as close as possible to the correction. 309 AMARG stamp error correction procedures differ as follows:

19.4.1.6.1. (Added) 309 AMARG when a stamp is illegible, the operation must be re-certified as complete by using “Notes on Back” procedures.

19.4.1.6.2. (Added) 309 AMARG for stamps entered in error, the operation must be re-opened by using “Notes on Back” procedures. To complete an operation that was previously entered in error, do not re-stamp on the front of the WCD, write “Notes on Back” in block 17. On the back of the page, write the operation number, “operation complete”, stamp and date.

19.4.2 (Added) 309 AMARG Stamp Program is the Responsibility of the 309 AMARG PAC manager.

19.4.2.1. (Added) 309 MXW stamp program manager is:

19.4.2.1.1. (Added) Appointed in writing by the wing commander and acts as the wing office of primary responsibility (OPR) to oversee the maintenance stamp program.

19.4.2.1.2. (Added) Conducts a yearly review of organizational stamp programs.

19.4.2.1.3. (Added) Maintains copies of organizational stamp manager assignment letters.

19.4.2.1.4. (Added) Assigns blocks of maintenance stamp numbers to each organization. Organizations are required to notify the 309 MXW/QP of any changes, deletions, or additions to their blocks of assigned numbers.

19.4.2.2. (Added) Group or squadron commanders will:

19.4.2.2.1. (Added) Provide executive oversight and resources for their respective organizational stamp programs.

19.4.2.2.2. (Added) Appoint an organizational stamp manager, in writing, and provide a copy of the memorandum to the 309 MXW/QPQ OPR for maintenance stamp management.

19.4.2.2.3. (Added) Ensure all stamp inventory listings are returned by supervisors to organizational stamp managers.

19.4.2.3. (Added) Organizational stamp managers will:

19.4.2.3.1. (Added) Receive and process original issue and replacement stamp requests for all organizational personnel requiring stamps.

19.4.2.3.2. (Added) Procure and secure stamps to fill requests.

19.4.2.3.3. (Added) Maintain organizational information in the TSS stamp database.

19.4.2.3.4. (Added) Conduct an annual inventory of all stamps.

19.4.2.3.5. (Added) Assign stamps to qualified employees and record the required information in the PACS/TSS stamp database. The expeditionary maintenance personnel flight shall document the information in PACS/TSS and Core Automated Maintenance System (CAMS).

19.4.2.3.6. (Added) Ensure maintenance stamps caps are marked with the stamp number of the issued stamp at the time of issue.

19.4.2.3.7. (Added) Issue new stamps to employees whose stamps have become illegible and update the TSS stamp database and PAC.

19.4.2.3.8. (Added) Document stamps that are lost, destroyed or illegible in database, alert other group stamp managers within the wing of the loss. (Exception for 309 AMARG).

19.4.2.3.9. (Added) Ensure all returned stamp annual audit inventory listing entries are either stamped, or a disposition of the stamp is given and the listing is signed by the supervisor.

19.4.2.3.10. (Added) Maintain stamp annual audit inventory listings and the inventory summary on file until replaced with the following year's inventory.

19.4.2.3.11. (Added) Sign and date a retiring, separating or transferring employee division/squadron out processing checklist as required, upon receipt of their assigned stamps.

19.4.2.4. (Added) First-line supervisors will:

19.4.2.4.1. (Added) Request appropriate stamps from the organizational stamp manager via e-mail or in writing when required training is completed.

19.4.2.4.2. (Added) Notify the organizational stamp manager, via e-mail or in writing, of any stamp revocations, including the employee's name, office symbol and stamp number, and return the revoked stamp to the organizational stamp manager.

19.4.2.4.3. (Added) Conduct a thorough search for any maintenance stamp or cap reported lost, and if not found, complete AFMC Form 310, , and notify the organizational stamp manager.

19.4.2.4.4. (Added) Notify and return a found stamp to the respective organizational stamp manager when a stamp is found to close the AFMC Form 310 filed for the lost stamp and notify group/squadron tool manager.

19.4.2.4.5. (Added) Notify and return a found stamp or cap to the organizational stamp manager.

19.4.2.4.6. (Added) Assist organizational stamp manager in conducting an annual inventory of all stamps.

19.4.2.4.7. (Added) Ensure maintenance stamp caps are marked with the stamp number of the stamp issued during the formal stamp audit.

19.4.2.4.8. (Added) Direct employees to immediately return illegible stamps to the organizational stamp manager for replacement and request replacement stamps via e-mail or in writing.

19.4.2.5. (Added) Employees will:

19.4.2.5.1. (Added) Pick up assigned stamps from the organizational stamp manager.

19.4.2.5.2. (Added) Safeguard stamps against unauthorized use or loss.

19.4.2.5.3. (Added) Report illegible stamps to their first-line supervisor.

19.4.2.5.4. (Added) Return stamp to the organizational stamp manager when transferring from a position requiring a stamp, separating, retiring or transferring from their current organization.

19.4.2.5.5. (Added) Annually provide a stamp impression and examine it with the supervisor for inventory and legibility purposes.

19.4.2.5.6. (Added) Conduct a thorough search and notify the first-level supervisor if stamp or cap becomes lost.

19.4.2.5.7. (Added) Maintain legible stamp number on maintenance stamp caps with the number of the stamp issued.

19.4.2.5.8. (Added) Do not modify maintenance stamp from its original issued construction.

Chapter 20

20.1. (Added) 309 AMARG AIRCRAFT HISTORICAL RECORDS

20.1.1. (Added) Aircraft Records. 309 AMARG Resource Management Division, Policy and Technical Services Branch (309 AMARG/QPQL) aircraft records:

20.1.1.1. (Added) Is the 309 AMARG repository of the records for aerospace vehicles, missiles and other assets stored at 309 AMARG.

20.1.1.2. (Added) Ensures no records will leave the office unless signed for on the custody and transfer record for permanent custody or AF Form 614, for temporary custody.

20.1.1.3. (Added) Prepares the custody and transfer record, which is not considered part of the official aircraft records and is used primarily as a records inventory tool and a quick reference for installed engines and engine and airframe times.

20.1.1.4. (Added) Aircraft records will be given 2 business days to process aircraft departures and 1 business day for component requests. All requests will be submitted via email for record keeping.

20.1.1.5. (Added) 309 AMARG Aircraft Records will file and store only those WCD's/PWO's such as (process in and preservation packages) that are considered significant aircraft historical data pertaining to maintenance actions taken on aerospace vehicles stored at 309 AMARG or currently installed aircraft items.

20.2. (Added) 309 AMARG ASSET RECORDS FOR PROCESS IN.

20.2.1. (Added) Incoming Aircraft. 309 AMARG Storage Division, Aircraft Receiving Branch (309 AMARG/MXDPAB) will ensure asset records are received IAW the interservice support agreement:

20.2.1.1. (Added) Prepare or complete an AFTO Form 290, for custody of AF aircraft. Ensure AFTO Form 290 entries are complete and correct. This form should have been prepared by the losing AF organization.

20.2.1.2. (Added) Prepare an Army/Navy Aerospace Vehicle Delivery Receipt, for Army, Navy and all other aerospace vehicles.

20.2.1.3. (Added) Prepare or complete an AFTO Form 471, *Electronic Set Inventory Checklist Configuration Data*, for photo vans, CEM equipment and the like.

20.2.1.4. (Added) Ensure all 309 AMARG required documents are present and complete. Note any missing documents on the applicable Form, sign and date the form to acknowledge receipt of the property and records. Include asset inventory shortage notifications, correspondence and replies in the records.

20.2.1.5. (Added) Prepare a list of components/items missing and/or removed from aircraft, for all assets identified as missing or removed on arrival to include classified and accountable inventory items.

20.2.1.6. (Added) Send the 309 AMARG asset records to aircraft records.

20.2.1.7. (Added) Place all documents generated during process-in into the aircraft jacket file package when all storage processing documentation has been cleared and completed. Forward the completed package to aircraft records to file with the records.

20.2.2. (Added) Towing Personnel. 309 AMARG Towing Branch (309 AMARG/MXDPAD) will:

20.2.2.1. (Added) Stamp and date the WCD or PWO after process-in is completed and asset is taken or towed to the storage location.

20.2.2.2. (Added) Send the WCD/PWOs to the 309 AMARG/MXDPA scheduler.

20.2.3. (Added) Completing Work. 309 AMARG/MXDPA scheduler will ensure the processing WCD/PWOs are completed, signed, stamped and dated and send the process package to aircraft records.

20.2.4. (Added) 309 AMARG Examination and Evaluation (E&E) Team. The E&E Team will:

20.2.4.1. (Added) Prepare an asset record to identify all missing items and those removed.

20.2.4.2. (Added) Send a copy of the asset record to Aircraft Records.

20.2.4.3. (Added) Review aircraft records for items removed prior to delivery and during the classified and accountable inventory, and for corrosion inspection and service or history items that may affect storage requirements.

20.2.5. (Added) Aircraft Records. 309 AMARG/QPQL Aircraft Records will:

20.2.5.1. (Added) Prepare an custody and transfer record upon receipt of each aircraft record.

20.2.5.2. (Added) Annually inventory all 309 AMARG aircraft records against the official on-line stored aircraft inventory. Submit the report to the chiefs of 309 AMARG/QPQL and 309 AMARG/QPQ and the 309 AMARG/QP director in turn with the following information:

20.2.5.2.1. (Added) Number of aircraft, missile, photo van, or etc. records stored sorted by owning service.

20.2.5.2.2. (Added) Number of discrepancies by owning services. Show MDS, serial number, whether or not a register sheet is in file and which file (stored or departed), status of the asset, description of the discrepancy, who signed for the missing records if asset departed, and what action has been done to correct discrepant records.

20.2.5.2.3. (Added) If the records didn't come with the aircraft/asset, show what documented actions were taken to obtain the records according to the Inter-service Agreement (ISA) and the owning service's directives on the AFTO Form 290. Document coordination with 578 SDS/MXDPAB and workload branch (309 AMARG/OBWW) to obtain the records.

20.3. (Added) AF Aircraft Records Processing at 309 AMARG.

20.3.1. (Added) Incoming Aircraft. 309 AMARG/QPQL Aircraft Records will:

20.3.1.2. (Added) Break the records down, completely dismantling in-coming containers. Break down all hardback binders.

20.3.1.3. (Added) Dismantle the pilot's flight book of AFTO Form 781, and place in a file folder in the following sequence:

20.3.1.3.1. (Added) Tab A. AFTO Form 290. Extract the aircraft model, serial number, released by activity and date received at 309 AMARG and enter on the custody and transfer record.

20.3.1.3.2. (Added) Tab B. AFTO Form 781F, *Aerospace Vehicle Flight Report and Maintenance Document*.

20.3.1.3.3. (Added) Tab C. AFTO Form 781H, *Aerospace Vehicle Flight Status and Maintenance*. Extract the total aircraft hours from the bottom of the page and enter on the custody and transfer record.

20.3.1.3.4. (Added) Tab D. AFTO Form 781A,.

20.3.1.3.5. (Added) Tab E. AFTO Form 781K, *Aerospace Vehicle Inspection, Engine Data, Calendar Inspection and Delayed Discrepancy Document*.

20.3.1.3.6. (Added) Tab F. AFTO Form 781D, *Calendar and Hourly Item Inspection Document*.

20.3.1.3.7. (Added) Tab G. AFTO Form 781J, *Aerospace Vehicle Engine Flight Document*. Check flight hours for accuracy against the transfer reporting equipment record or the engines' AFTO Form 95.

20.3.1.4. (Added) Mark a file folder AFTO Form 95 for the airframe AFTO Form 95, and file in date sequence with the most current on top.

20.3.1.4.1. (Added) Annotate the 309 AMARG date and *Aircraft processed into storage* IAW TO 1-1-686 on the latest AFTO Form 95 on the top in the file folder or create a new AFTO Form 95. Annotate the total aircraft flying time as TT.00000.0, which is the total of the flight time to 309 AMARG plus the total flight time annotated on the AFTO Form 95.

20.3.1.4.2. (Added) Check the AFTO Form 95 for the latest overhaul date and the aircraft flying time at overhaul. Enter the information on the register sheet and highlight, in yellow, on the original AFTO Form 95. If the depot maintained was by module, enter that date.

20.3.1.5. (Added) Make a 309 AMARG file folder for each engine's AFTO Form 95, and mark each folder #1 ENG, #2 ENG, etc. File the AFTO Form 95 for each engine in date sequence with the most current on top.

20.3.1.5.1. (Added) For each engine make the proper annotation on the current AFTO Form 95, or create a new form, *Rec'd Eng position #___ On A/C ____, Total A/C hours _____*. *Processed into storage* IAW TO 2-1-32. *ENG TSO: 00000.0 ENG TSN: 00000.0*.

20.3.1.5.2. (Added) Check the engine AFTO Form 95 for the last overhaul date and time and enter the information on the Custody and Transfer Record.

20.3.1.6. (Added) Mark an 309 AMARG file folder *APU AFTO 95* or *GEN AFTO 95* or *GTS* as appropriate. File the APU or power generator or gas turbine starter Forms with the most current on top. Make the receiving annotation on the current form and Custody and Transfer record.

20.3.1.7. (Added) Mark an 309 AMARG file folder *BLADES AFTO 95s* or *PROPS AFTO 95s* when appropriate for helicopter blades or aircraft propellers (Prop). Make the receiving annotations on the Forms and annotate Form with *Prop Rec'd @A/C TT: 00000.0, Blade TTSN: 00000.0, TSO: 00000.0*. Identify the main rotor and tail rotors by serial number and annotate the TT: times.

20.3.1.8. (Added) Make or place 309 AMARG file folders in an accordion file in the sequence indicated in Table 3.1.

Table 3.1. (Added) File Folder Order

Incoming AFTO Form 781s
A/C AFTO 95s
ENG AFTO 95s
APU or GEN AFTO 95s
PROP/BLADE, label as Prop #1, Prop #2
TCTOs, ACMS, Time Changes
FCF
History, AFTO Form 781s
AF 391 – Parachute Log
Phase Inspection
Misc
Fuel Records
AF Form 388, <i>Communication Control Record</i>
Weight and Balance

20.3.1.9. (Added) Place 2-inch masking tape on the right end of the accordion file, and mark with black felt tip pen as indicated in Table 3.2.

Table 3.2. (Added) File Folder Spine Markings.

Model
Year
Serial Number
Vol. I or Vol. II, etc.
X-Rays (if appropriate, with red marking pen)

20.3.1.10. (Added) Put the completed 309 AMARG record in the engine manager hold area and notify the Logistics Directorate, Supply Division (LGS) Engine Managers that they have engines to process. Make a note of the date and time the engine manager was notified. Once the engines are processed, place all volumes on the service's file shelf sequenced by aircraft model, year and serial number.

20.3.1.11. (Added) Type the custody and transfer record register sheet with the data from the records. In the Remarks section, annotate X-Rays or MODods if some have been received with the aircraft.

NOTE: (Added) Total time for the aircraft, engines, and other time tracked times.

20.3.1.12. (Added) Label x-rays and file in the X-ray section of the records shelves in sequence by aircraft MDS and serial number or Navy bureau number (BUNO).

20.3.1.13. (Added) 309 AMARG Transfer Reporting Equipment (TRE) records – mark the end of the TRE folder with the serial number of the aircraft and place inside the aircraft record accordion folder if there is room or tie it to the outside.

20.3.1.14. (Added) Create a file folder for 309 AMARG documentation and affix to the outside of the package. Mark the folder with the serial number. Make a copy of the custody and transfer record, and place in this folder.

20.3.2. (Added) 309 AMARG Process Out, Fly-Away.

20.3.2.1. (Added) 309 AMARG Flight Test (QP-FT) will:

20.3.2.1.1. (Added) Sign out the aircraft weight and balance book on AF Form 614 to compute the weight of the aircraft, and then return the book to aircraft records.

20.3.2.1.2. (Added) Sign the custody and transfer record, for custody of the aircraft records.

20.3.2.1.3. (Added) Ensure the ferry pilot signs the AFTO Form 290 accepting custody of the aircraft and records.

20.3.2.1.4. (Added) Screen all aircraft records and confirm IAW AFTO Form 290.

20.3.2.1.5. (Added) Place all aircraft records including the AFTO Form 781 into the aircraft records jacket.

20.3.2.2. (Added) Aircraft Division (576 AMRS) will:

20.3.2.2.1. (Added) Sign out the AF Form 2692, from aircraft records office to determine what equipment is in storage to be reinstalled on the aircraft.

20.3.2.2.2. (Added) Complete a new AF Form 2692 to reflect current equipment installed on the aircraft and give to aircraft records to file.

20.3.2.2.3. (Added) Complete the AFTO Form 781 flight book and give to the 576 AMRS scheduler.

20.3.2.3. (Added) 309 AMARG Aircraft Records will:

20.3.2.3.1. (Added) Prepare a holdback folder for the aircraft and:

20.3.2.3.1.1. (Added) Mark it *HOLDBACK*, and with the aircraft type and serial number.

20.3.2.3.1.2. (Added) File all process-out QA-FT documentation for fly-away.

20.3.2.3.1.3. (Added) File all process-in and represervation-in-storage WCD/PWOs.

20.3.2.3.1.4. (Added) Clear all folders of 309 AMARG WCD/PWOs and file in the aircraft holdback folder.

20.3.2.3.1.5. (Added) File copies of incoming AFTO Form 781, corrected Advanced Configuration Management System forms corrected in red and the complied with (c/w) date. Enter copies of the signed and dated AFTO Form 95 for the airframe with listed TCTOs annotated, and copies of accessory replacement records.

20.3.2.3.2. (Added) Prepare a pilot's folder:

20.3.2.3.2.1. (Added) Mark it *PILOT'S FOLDER*, and with the aircraft type and serial number.

20.3.2.3.2.2. (Added) Prepare and file an AF Form 290 transferring custody of the aircraft.

20.3.2.3.2.3. (Added) Give to 309 AMARG QP-FT, with the final aircraft records and the weight and balance book. Ensure the custody and transfer record, is signed accepting custody of the records.

20.3.2.3.3. (Added) Ensure copies of current AFTO Form 781K, for the engine trim and the oil analysis are placed in the engine records file for the aircraft, behind the AF Form 2692 and the AFTO Form 95 for the airframe.

20.3.2.3.4. (Added) Ensure all TCTO are complied with and the documentation is entered into the aircraft AFTO Form 95 prior to giving the records to QP-FT. If all the paperwork is not turned in, contact the 578 SDS/MXDPA scheduler.

20.3.2.3.5. (Added) Review the aircraft records in the record jacket (expanding wallet envelope) to ensure the entries are all made, applicable forms are entered, and the folders are placed in order:

20.3.2.3.5.1. (Added) AF Form 2692, always in a brown envelope.

20.3.2.3.5.2. (Added) AFTO Form 95 for the airframe.

20.3.2.3.5.3. (Added) AFTO Form 95 for the engines in folders for each engine, labeled #1, #2, etc.

20.3.2.3.5.4. (Added) AFTO Form 95 for miscellaneous and components in an appropriately marked folder.

20.3.2.3.5.5. (Added) TCTO/Time Change folder with the completed AFTO Form 781; Check off the list provided by 309 AMARG/MAB planner, of TCTOs that were to be performed on the aircraft. Enter the TCTOs that were completed on the applicable AFTO Form 95, i.e., aircraft, engine, or etc.

20.3.2.3.5.5.1. (Added) Blocks 1 through 4 are self-explanatory.

20.3.2.3.5.5.2. (Added) Block A, Date. Enter the date from the PWO/WCD the TCTO was completed.

20.3.2.3.5.5.3. (Added) Block B, Remarks. TCTO number and date, underlined, and then the title.

20.3.2.3.5.5.4. (Added) Block C, Organization. 309 AMARG, DMAFB AZ.

20.3.2.3.6. (Added) Give the aircraft record jacket with the weight and balance book to QP-FT, and ensure the custody and transfer record is signed for custody of the records.

20.3.2.3.7. (Added) File the custody and transfer record in the departed aircraft log according to the owning service and MDS.

20.3.2.4. (Added) 309 AMARG/MXDPA Scheduler will:

20.3.2.4.1. (Added) Ensure all the completed WCD/PWOs data are entered and they are closed.

20.3.2.4.2. (Added) Forward all the completed flyaway AFTO Form 781 to QP-FT.

20.3.2.4.3. (Added) Ensure all the TCTOs and time compliance work orders are completed, data entries made, and forwarded to aircraft records. Follow up to the crew chief, as necessary, to ensure all the paperwork is sent to aircraft records for entry in the aircraft records prior to departure of the aircraft.

20.3.3. (Added) 309 AMARG Process Out, Overland.

20.3.3.1. (Added) Prior to processing out the commodities directorate will ensure:

20.3.3.1.1. (Added) All aircraft are inspected for radiation and hazardous materials.

20.3.3.1.2. (Added) Demilitarization is performed if required.

20.3.3.2. (Added) 309 AMARG Aircraft Records will:

20.3.3.2.1. (Added) Prepare a holdback folder to keep all WCD/PWOs for process-in and represervation work on the aircraft. The holdback folder will be kept for 12 months unless written direction is received to keep for a longer period.

20.3.3.2.2. (Added) Ensure custody of all aircraft records and x-rays is signed for on the custody and transfer record.

20.3.3.2.3. (Added) File the custody and transfer record, in the service's departed logbook by MDS.

20.3.3.3. (Added) 309 AMARG/OBWW signs for and accepts the aircraft records and x-rays for museum aircraft or those destined for static display.

20.3.3.4. (Added) The records and any x-rays will accompany aircraft shipped overland. They will be picked up and signed for by the section preparing the aircraft for shipment.

20.4. (Added) 309 AMARG Navy Aircraft Records Processing:

20.4.1. (Added) Incoming Asset Records.

20.4.1.2. (Added) Ensure all the records are sorted and filed properly. OPNAVINST 4790.2G, Volume (Vol.) 1, Chapter 13, Logbook Clerk, Aircraft Logbook/Records, and Reports, Figure 13, Logbook Construction and Sequence provides a detailed description of the required forms and sequence of the aircraft log book contents used to record the maintenance and servicing of the aircraft.

20.4.1.2.1. (Added) The 309 AMARG Custody and Transfer Record, prepared by 309 AMARG/MXDPAB will be filed in front of Vol. 1. This is signed by receiving branch to acknowledge receipt of the aircraft records and is initialed in the Navy checklist blocks for the records that were received, missing or not applicable.

20.4.1.3. (Added) Place 2-inch masking tape on the spine of the binder or binders, and label the MDS across the top, the BUNO/serial number down and the volume number across the bottom.

20.4.1.3.1. (Added) Attach the weight and balance book to Vol. 1 with a rubber band or place in the folder. There MUST be a weight and balance book for each Navy aircraft.

20.4.1.3.2. (Added) Use a file folder to keep the 309 AMARG process-in and represervation-in WCDs and the E & E report.

20.4.1.4. (Added) OPNAVINST 4890.2G, Vol. 1 Chapter 12, provides the requirements for the Aircraft Inventory Records book.

20.4.1.4.1. (Added) Lists the standard equipment installed on the aircraft, any removals and replacements to include:

20.4.1.4.1.1. (Added) Special equipment essential to the health, safety and morale of the crew.

20.4.1.4.1.2. (Added) Equipment and material for the protection of the aircraft during flight and overnight storage, i.e., covers, control locks, plugs and external opening covers.

20.4.1.4.1.3. (Added) Pilferable type items, i.e., clocks, tool kits, compasses, etc.

20.4.1.4.1.4. (Added) Classified items.

20.4.1.4.1.5. (Added) Loose equipment items applicable to the aircraft.

20.4.1.4.1.6. (Added) Mission essential equipment.

20.4.1.4.1.7. (Added) OPNAV 4790/112, *Shortages*, authority for shortage referenced and copy of letter, message, and document included in the AIR until the shortage is filled. If the shortages are not recorded, itemize and list shortages to the sending organization. The item number will correspond to the item number on the AIR.

20.4.1.4.1.8. (Added) OPNAV 4790/104, *Certification and Record of Transfer*, an inventory is made and certified before the ferry flight, and after completing the transfer.

20.4.1.4.2. (Added) Any 309 AMARG removal notices will be kept in this book.

20.4.1.4.3. (Added) Records will be disposed as prescribed by SECNAVINST 5212.5C, *Navy and Marine Corps Records Disposition Manual*, Chapter 13, Aeronautical and Astronautical Material Records, or specific record form disposal guidance in OPNSVINST 4890.2G.

20.4.1.5. (Added) Make the applicable entries on the Navy Aircraft Logbook forms as follows:

20.4.1.5.1. (Added) Flight Tab, OPNAV 4790/21A, *Monthly Flight Summary*, is used to record flight data. Extract the flying hours and landings data from the Army/Navy aerospace vehicle delivery receipt and add the flight hours to the prior totals in columns 3, flying hours, and 6, accumulated total. This accumulated total will be entered on the custody and transfer record.

20.4.1.5.2. (Added) Inspection Tab, OPNAV 4790/22A, *Inspection Record*, type or print *Acceptance Insp.*, OPNAVINST 4890.2G, the date received from the Army/Navy aerospace vehicle delivery receipt, the date completed from the E&E PWO/WCD, 309 AMARG DMAFB AZ in block 8, and sign in block 9.

20.4.1.5.3. (Added) Repair/Rework Tab, OPNAV 4790/23A, *Repair/Rework Record*, look for the last standard depot level maintenance (SDLM), i.e. overhaul. Extract who performed the SDLM, how many SDLMs were done, the date and hours on the aircraft at the time of the SDLM and enter on the custody and transfer record.

20.4.1.5.4. (Added) Miscellaneous/History Tab, OPNAV 4790/25A, *Miscellaneous/History*, type or print the following entry: “*EFFECTIVE THIS DATE, HYDRAULIC SAMPLES WERE TAKEN AS PART OF THE ACCEPTANCE INSP. RESULTS AS FOLLOWS: FLIGHT SYSTEM: PASS or FAIL; COMBINED SYSTEM: PASS or FAIL; STRUTS: PASS or FAIL*”. The test samples obtained during pre-induction process-in are sent from the testing facility to 309 AMARG and the sampling data and results will be entered here and the sheet filed in the 309 AMARG work folder. During processing out/flyaway, the receipt/installation date for ejection seats and APUs and the source address for these items will be entered on this form.

20.4.1.5.5. (Added) Preservation/Depreservation Tab, OPNAV4790/136A, “*Preservation/Depreservation Record*”. Blocks 1, 2 and 3 are self-explanatory. Block 4a is the date preservation is completed according to the WCD/PWO where airframe preservation C/W (complied with) is entered. Block 4b is 309 AMARG DMAFB AZ. Block 4c is the type storage, i.e., 1000, 2000, and 4000. Block 4d is NAVAIR 15-01-4, always used for the aircraft, engine, APU, ejection seats and the NAVAIR publication applicable to the aircraft preservation as annotated on the WCD and/or PWO. Block 6, depreservation entries are from the WCD/PWO for maintain-in or processing out. This form is also required for each engine and APU; it is not applicable for propellers.

20.4.1.5.6. (Added) Explosive Devices Tab, OPNAV Form 4790/26A, *Installed Explosive Device Record*, is removed from the record book and given to F-4 Branch, Egress Section (309 AMARG/MABAE) to put with the removed devices.

20.4.1.5.7. (Added) OPNAV Form 5442/9, *Aircraft Record A*, used for x-ray reports may be received with logbooks and are filed in the back pocket of the logbook.

20.4.1.5.8. (Added) OPNAV Form 4790/18, *Aircraft Non-Aging Record*, is obsolete and entries will no longer be made.

20.4.2. (Added) Process Out, Fly-Away.

20.4.2.1. (Added) Prepare a folder marked PILOT’S FOLDER, add the aircraft type and BUNO number. Complete the Army/Navy aerospace vehicle delivery receipt for the aircraft and put in the folder. If there is an OPNAV Form 4790/30A (now obsolete) in the records, complete, sign and date it.

20.4.2.2. (Added) Prepare a folder marked HOLDBACK, add the aircraft type and BUNO number. Ensure all pockets of the logbooks are cleared of 309 AMARG WCD/PWOs and they are placed in the holdback folder for the aircraft. The holdback folder is kept for 12 months unless directed otherwise in writing.

20.4.2.3. (Added) In the miscellaneous/history tab of the aircraft logbook, make entries for each of the airframe, engines-propulsion system for each engine by serial number, the gas turbine compressor or APU, propeller assembly and gun assembly removal. For example: Effective this date engine OTH2084 is ready for transfer to the government of Siam. Sign over 309 AMARG/DMAFB AZ. Also for each engine, enter the statements Engine Propulsion System Module (EPSM) stricken from the Navy inventory by UIC65965. EPSM was under 00383 NAVAIR controlling custody at the time of the strike. EPSM will be forwarded to the government of Siam. These last three statements are not applicable if the aircraft is being returned to the Navy. If there is an applicable gun system the statements must include Effective this date, M161A1 gun system was transferred to xxxx. Enter the correct serial number and the recipient of the gun assembly.

20.4.2.4. (Added-) Under the Inspection tab, make entries as shown above for each of the airframe, engines, gas turbine compressor or APU, propeller assembly and gun assembly removal.

20.4.2.5. (Added) Under the preservation/depreservation tab, make entries as shown above for each of the components that require depreservation, i.e., airframe, engines and APUs.

20.4.2.6. (Added) Enter the engine oil analysis results.

20.4.3. (Added) 309 AMARG Process Out, Overland.

20.4.3.1. (Added) Prior to process-out disposal flight or 577 CRS will ensure:

20.4.3.1.1. (Added) All aircraft are inspected for radiation and hazardous materials.

20.4.3.1.2. (Added) Demilitarization is performed if required.

20.4.3.2. (Added) Aircraft Records will:

20.4.3.2.1. (Added) Prepare a folder marked *HOLDBACK*, add the aircraft type and BUNO number. Ensure all pockets of the logbooks are cleared of 309 AMARG WCD/PWOs and they are placed in the holdback folder for the aircraft. The holdback folder is kept for 12 months unless directed otherwise in writing.

20.4.3.2.2. (Added) The records and any x-rays will accompany aircraft shipped overland. They will be picked up and signed for by the division preparing the aircraft for shipment.

20.4.3.2.3. (Added) Notify the LGS, engine manager by e-mail if the engine records are with the aircraft records that the engine records may be picked up by the engine manager.

20.4.3.2.4. (Added) Notify appropriate scheduler by e-mail the aircraft records are ready for pickup when accountability is transferred.

20.5. (Added) 309 AMARG ARMY Records. Aircraft logbook forms and records are in the aircraft logbook, which is kept onboard the aircraft except while in storage at 309 AMARG. The historical records are not part of the logbook and should be shipped separately. Follow the guidelines in DA PAM 738-751, *Functional Users Manual for the Army Maintenance Management System-Aviation (TAMMS-A)*.

20.5.1. (Added) Incoming Aircraft. 309 AMARG/QPQL Aircraft Records will:

20.5.1.1. (Added) Dismantle and review all the records.

20.5.1.1.1. (Added) When the required records IAW DA PAM 738-751, are missing from the aircraft logbook, request the records from the transferring or shipping activity IAW the ISA. If the information is not forthcoming, contact the POC as provided in the ISA.

20.5.1.1.2. (Added) Place the logbook records in the order listed in DA PAM 738-751, paragraph 1.15c (4) (d).

20.5.1.1.3. (Added) Use the data in these forms to complete the custody and transfer record.

20.5.1.1.4. (Added) Enter the oil analysis information into the log when tested.

20.5.1.1.5. (Added) The aircraft maintenance historical forms, and records should not be on the aircraft. The recommended mode of transfer is by any traceable means. These forms are for recording the organizational and support maintenance and quality control functions on the aircraft. Prepare new maintenance and historical forms when the missing information is received. No records are to be filled in pencil unless specifically stated. File the forms in the aircraft record folder in the sequence listed in DA PAM 738-751, paragraph 1.15e.

20.5.1.1.6. (Added) File the pertinent aircraft examination and evaluation data forms in the jacket file as they are received from 309 AMARG/MXDPAB.

20.5.1.1.7. (Added) Notify the LGS, engine manager that the engine records are ready for review.

20.5.2. (Added) 309 AMARG Process Out, Fly-Away.

20.5.2.1. (Added) Aircraft records will give the aircraft logbook records to 309 AMARG/QP-FT.

20.5.2.2. (Added) 309 AMARG/QP-FT will compute the weight and balance and return the records to Aircraft records.

20.5.2.3. (Added) Aircraft records office will complete a new record and:

20.5.2.3.1. (Added) Review all records and remove all WCD/PWOs. These will be placed in the holdback file for this aircraft.

20.5.2.3.2. (Added) Ensure all unrepaired maintenance, changed serialized parts, etc. are recorded on the appropriate forms in the aircraft logbook.

20.5.2.3.3. (Added) Send the aircraft logbook to 309 AMARG/QP-FT prior to the ferry pilot's arrival; it will be given to the ferry pilot to go with the aircraft when it departs.

20.5.3. (Added) Process Out, Overland.

20.5.3.1. (Added) Prior to processing out the 576 AMRS or 577 CRS planner, as applicable, will ensure:

20.5.3.1.1. (Added) All aircraft are inspected for radiation and hazardous materials.

20.5.3.1.2. (Added) Demilitarization is performed if required.

20.5.3.2. (Added) Aircraft records will:

20.5.3.2.1. (Added) Prepare a folder marked HOLDBACK add the aircraft type and serial number. Ensure all pockets of the logbooks are cleared of 309 AMARG WCD/PWOs and they are placed in the holdback folder for the aircraft. The holdback folder is kept for 12 months.

20.5.3.2.2. (Added) Notify the division preparing the aircraft for shipment that the records and any x-rays will accompany aircraft shipped overland are ready for pick up.

20.6. (Added) 309 AMARG Coast Guard Records. These records may be Federal Aviation Agency (FAA) forms, Navy or Army forms or AF forms. They will be used and filed according to the instructions governing the specific forms. If the aircraft records are a combination, use the latest entries to determine which of the preceding processes to follow.

20.7. (Added) 309 AMARG - Engine Records.

20.7.1. (Added) LGS engine mManager is responsible for all engine records.

20.7.2. (Added) When an engine is installed on an aircraft, the engine records are filed with the aircraft and the engine serial number is recorded. The engine manager will enter the information into the owning service's engine management system.

20.7.3. (Added) When the engine is reclaimed, removed, or replaced, the processing must go through the engine manager and the record will be annotated.

20.7.4. (Added) The engine manager will sign the aircraft engine records before removing them from the aircraft records file.

20.8. (Added) - Miscellaneous Records.

20.8.1. (Added) Missile location was transferred to 309 AMARG and the AFTO Form 95 were created by 309 AMARG/MXDPAB during in-processing.

20.8.2. (Added) Miscellaneous owned aircraft, i.e., owned by other US government or foreign government agencies may be sent to 309 AMARG. Extract the records and technical data required to store and preserve the aircraft. Return excess, obsolete and unneeded records to the aircraft for storage. Retain only the most current records for the aircraft. Mark the record jacket with the owner, serial number and MDS.

20.8.3. (Added) B52 pylon load adapters are filed numerically. There are no AFTO Form 95, WCD/PWOs nor reseals.

20.8.4. (Added) SUU-67/A Cruise Missile Pylons usually have no documentation. There are no AFTO Form 95s with entries, no WCD/PWOs or reseals.

20.9. (Added) AMARG - Released Assets. When assets are released to disposal flight the aircraft disposition office will:

20.9.1. (Added) Accept custody of aircraft records and x-rays for aircraft going to GSA, to any service's bombing ranges for targets, to DRMO for sale or disposal as scrap. The x-rays will accompany the aircraft records.

20.9.2. (Added) Destroy the records if the aircraft are destroyed.

20.9.3. (Added) Send unneeded x-rays to DRMO.

20.9.4. (Added) Sign for and pickup the records from aircraft records and provide to the customer accepting custody of the aircraft.

20.10. (Added) 309 AMARG - Integrated Maintenance Data Systems (IMDS).

20.10.1. (Added) IMDS is performed at 309 AMARG in QPQL aircraft records on the F4 and F16 drone project aircraft.

20.10.2. (Added) IMDS inputs are made to load the aircraft that are brought out of storage for the drone program, and flown to the contractor load and mate the J-79 and F-100 engines to the aircraft, and load all the serially controlled components for the aircraft.

20.10.3. (Added) Only the TCTOs, engines, serially controlled components and major component changes are entered that were complied with or performed up to the departure of the aircraft.

20.11 (Added) 309 AMXG Aircraft Documents Retention and Disposition (also known as dead file or aircraft records).

20.11.1. (Added) Aircraft documents such as WCD, routed orders, temporary work requests, and nonconforming technical assistance requests, are normally preprinted and used for work control, identification of work material, PAC, and routing of items for repair within the 309 AMXG. These documents, including F-16, C-130, and A-10, and F-22 aircraft, are required for depot production accountability and must be secured and maintained in an audit available file for 1 year, and crash damage aircraft for 2 years after the aircraft depot departure date. All aircraft documents will be maintained in one location in Building 225, Room 105-B (located in the North-center section). A specially designed automated vertical storage system provides storage for the aircraft records. 309 AMXG maintenance squadrons are responsible for maintenance of

the aircraft records. Aircraft schedulers from the maintenance squadrons are responsible for input, maintenance, and disposal of documents stored in the automated storage system.

20.11.3. (Added) Additional depot maintenance documentation may be included in the aircraft record, if needed, to fully document aircraft maintenance actions.

20.12. (Added) 309 AMXG Responsibilities:

20.12.1. (Added) 309 AMXG/ EN engineering technician will:

20.12.1.1. (Added) Provide initial and refresher training on using the aircraft record carousel for a primary and alternate aircraft scheduler POC for each maintenance squadron (i.e. A-10, F-16, C-130, F-22, customer support etc.).

20.12.1.2. (Added) Ensure the system is being used correctly, and continuously monitor the aircraft record room and support the primary or alternate POC's when problems or questions arise.

20.12.1.3. (Added) EN will ensure only authorized personnel have access to the 309 AMXG aircraft records. Production supervisors, schedulers, planners, customer support personnel, aircraft impoundment officials, aircraft quality assurance, and safety normally are the only individuals authorized access. All others must have authorization from the 309 AMXG/EN engineering technician on a case-by-case basis.

20.12.2. (Added) The primary POC for each organization will:

20.12.2.1. (Added) Be trained on the aircraft record carousel system by EN technician, and be responsible for maintaining his/her respective aircraft records. As needed a primary POC may train additional schedulers to use the aircraft record carousel.

20.12.2.2. (Added) Ensure that all aircraft documents are separated by aircraft tail number and project number. Special care will be taken to ensure files are separated and loaded correctly.

20.12.2.3. (Added) Will review the PDMSS to determine aircraft departure dates, and when the aircraft documents are to be destroyed, and then destroy them in a secured trash bin.

20.12.2.4. (Added) Ensure that all 309 AMXG schedulers and back shop schedulers hand carry completed aircraft documents within 30 days to their primary or alternate POC, unless they have been trained by their primary POC to use the aircraft record system.

Chapter 21 (Added)

(Added) 309 MXW INTERNAL AUDIT PROGRAM.

21. (Added) PURPOSE; This chapter provides policies and procedures for conducting internal audits throughout the 309th Maintenance Wing, IAW the most current AF, AFMC, OO-ALC, 309 MXW and AS9100C/AS9110A requirements.

21.1. (Added) Audit Program Objectives:

21.1.1. (Added) Meet requirements for certification to AS9100C and AS9110A Management System standards;

21.1.2. (Added) Verify conformance with contractual, regulatory, and statutory requirements;

21.1.3. (Added) Contribute to improvement of the 309 MXW management system.

21.2. (Added) Audit Program Procedures: The internal audit program consists of the following procedures:

21.2.1. (Added) Planning and scheduling audits.

21.2.2. (Added) Assuring the competence of auditors and audit team leaders.

21.2.3. (Added) Selecting appropriate audit teams and assigning their roles and responsibilities.

21.2.4. (Added) Conducting audits.

21.2.5. (Added) Conducting audit follow-up, if applicable.

21.2.6. (Added) Maintaining audit program records.

21.2.7. (Added) Monitoring the performance and effectiveness of the audit program.

21.2.8. (Added) Reporting to top management on the overall achievements of the audit program.

21.3. (Added) Audit Program Records: The following records are maintained with the QPP supervisor (for personnel records) or the electronic records management file system:

21.3.1. (Added) Audit schedules, audit reports, corrective and preventive action reports, audit follow-up reports if applicable, results of audit program review.

21.3.2. (Added) Records related to audit personnel covering subjects such as: auditor competence and performance evaluation, audit team selection, and maintenance and improvement of competence.

21.4. (Added) Audit Program Monitoring and Reviewing:

21.4.1. (Added) The implementation and sustainment activities of the audit program should be monitored and at appropriate intervals, reviewed to assess if objectives have been met and to identify opportunities for improvement. The results should be reported to top management.

21.4.2. (Added) Audit program performance (schedule completion, auditor performance, effectiveness of audit follow-up, and ethical conduct of auditors and audit program managers).

21.4.3. (Added) Audit program contribution to management system improvement.

21.4.4. (Added) Performance indicators should be used to monitor characteristics such as:

21.4.4.1. (Added) The ability of the audit teams to implement the audit plan.

21.4.4.2. (Added) Conformity with audit program and schedules, and

21.4.4.3. (Added) Feedback from audit clients, auditees and auditors.

21.4.5. (Added) The audit program review should consider, for example:

21.4.5.1. (Added) Results and trends from monitoring.

21.4.5.2. (Added) Conformity with procedures.

21.4.5.3. (Added) Evolving needs and expectations of interested parties.

21.4.5.4. (Added) Audit program records.

21.4.5.6. (Added) Alternative or new auditing practices and results of audit program reviews can lead to corrective and preventive actions, and the improvement of the audit program.

21.5. (Added) Responsibilities:

21.5.1. (Added) All organizations included within the scope of the International Standard Organization (ISO) registration are to operate IAW the AS9100C/AS9110A standard. Internal audits are conducted periodically to ensure compliance to the clauses of the standard within each three year registration period.

21.5.2. (Added) Each maintenance group deputy director is identified as the AS9100C/AS9110A management representative for their respective groups, just as the wing deputy director is the management representative for the wing.

21.5.3. (Added) The group management representative will be responsible to ensure that as the group process owner; all C/PARs written within that organization are responded to in a timely manner.

21.5.4. (Added) Groups choosing to develop and implement their own internal audit program shall follow the guidance provided in this chapter and with Chapter 22 of this supplement.

21.5.5. (Added) The wing quality office is responsible for planning and conducting wing-level audits, reporting of results, and maintaining records of such audits.

21.5.6. (Added) The purpose of conducting internal audits is to determine whether the processes of the management system conforms to planned arrangements, to the requirements of AS9100C/AS9110A, to the requirements established by the organization, and to determine if the processes have been effectively implemented and maintained.

21.5.7. (Added) The wing quality office audits all organizations within the scope of the aerospace standard (AS9100C/AS9110A) registration.

21.5.8. (Added) Top management of the reviewed organization will ensure that corrective actions are taken without undue delay to eliminate detected non-conformities and their causes.

21.5.9. (Added) Audit team leader Responsibilities may include:

21.5.9.1. (Added) Ensuring that the scope and purpose of the audit are clearly defined;

21.5.9.2. (Added) Assigning specific responsibilities for the audit;

21.5.9.3. (Added) Ensuring that any checklists, worksheets, or other working documents have been adequately prepared prior to the audit;

21.5.9.4. (Added) Conducting the opening meeting;

21.5.9.5. (Added) Resolving differences during the audit;

21.5.9.6. (Added) Ensuring that the audit plan was thoroughly completed;

21.5.9.7. (Added) Conducting the closing meeting;

21.5.9.8. (Added) Ensuring that records of the audit are completed and properly filed.

21.5.10. (Added) Guides and observers; may accompany the audit team but are not a part of it.

21.5.10.1. (Added) They should not influence or interfere with the conduct of the audit.

21.5.10.2. (Added) When guides are appointed by the auditee, they should assist the audit team and act on the request of the audit team leader.

21.5.10.3. (Added) Their responsibilities may include the following:

21.5.10.3.1. (Added) Establishing contacts and timing for interviews;

21.5.10.3.2. (Added) Arranging visits to specific parts of the site or organization;

21.5.10.3.3. (Added) Ensuring that rules concerning site safety and security procedures are known and respected by the audit team members;

21.5.10.3.4. (Added) Witnessing the audit on behalf of the auditee;

21.5.10.3.5. (Added) Providing clarification or assisting in collecting information.

21.6. (Added) Definitions:

21.6.1. (Added) Defining audit objectives, scope and criteria;

21.6.1.1. (Added) Within the overall objectives of an audit program, an individual audit should be based on documented objectives, scope and criteria.

21.6.1.2. (Added) The audit objectives define what is to be accomplished by the audit and may include the following:

21.6.1.2.1. (Added) Determination of the extent of conformity of the auditee's management system, or parts of it, with audit criteria;

21.6.1.2.2. (Added) Evaluation of the capability of the management system to ensure compliance with statutory, regulatory and contractual requirements;

21.6.1.2.3. (Added) Evaluation of the effectiveness of the management system in meeting its specified objectives;

21.6.1.2.4. (Added) Identification of areas for potential improvement of the management system.

21.6.2. (Added) Audit scope describes the extent and boundaries of the audit such as physical locations, organizational units, activities and processes to be audited, as well as the time period covered by the audit.

21.6.3. (Added) Audit criteria are used as a reference against which conformity is determined and may include applicable policies, procedures, standards, laws and regulations, management system requirements, contractual requirements or industry/business sector codes of conduct.

21.6.4. (Added) Audit objectives should be defined by the audit client. The audit scope and criteria should be defined between the audit client and the audit team leader IAW audit program procedures. Any changes to the audit objectives, scope or criteria should be agreed to by the same parties. Where a combined audit is to be conducted, it is important that the audit team leader ensures that the audit objectives, scope and criteria are appropriate to the nature of the combined audit.

21.7. (Added) Competence and Evaluation of Auditors.

21.7.1. (Added) Fulfill and maintain education and training requirements (reviewed every 3 years).

21.7.2. (Added) Complete and pass a 3-day internal auditing course or,

21.7.3. (Added) Complete and pass a 5-day lead auditors course to qualify as a lead auditor.

21.7.4. (Added) Confidence and reliance in the audit process depends on the competence of those conducting the audit. This competence is based on the demonstration of:

21.7.4.1. (Added) Personal attributes outlined in 7.2; and,

21.7.4.2. (Added) Ability to apply the knowledge and skills described in 7.3 gained through the education, work experience, auditor training, and audit experience described in 7.4.

21.7.4.3. (Added) This concept of auditor competence is illustrated in Figure 4. Some of the knowledge and skills outlined in 7.3 are common to auditors of quality and environmental management systems, and some are specific to auditors of the individual disciplines. Auditors develop, maintain and improve their competence through continual professional development, and regular audit participation (see 7.5).

21.7.5. (Added) The process for identifying, training and evaluating auditors and determining their competence is shown in the flowchart (**Figure 1S**) below.

21.7.5.1. (Added) The first step is the identification of potential auditors and their initial evaluation against appropriate criteria which might include: personal attributes (see ISO 19011: 7.2); basic reading, writing and oral communication skills (see ISO 19011: 7.3.1a); and specific technical and/or management knowledge and skills depending upon the needs of the audit program (see ISO 19011:7.3.3 and 7.3.4).

21.7.5.2. (Added) The next step is auditor skills training, the gaining of audit experience and a further evaluation using appropriate criteria. The evaluation criteria at this step should be based on the skills and knowledge in Clause 7.3.1 of ISO 19011.

21.7.5.3. (Added) Similarly for the evaluation and selection of audit team leaders, there should be an evaluation based on the skills and knowledge in ISO 19011 Clause 7.3.2.

21.7.5.4. (Added) The next step is the evaluation and selection of audit team leaders and auditors for specific audits. Audit program management should establish the skills and knowledge needed for the particular audit based on ISO 19011 Clauses 7.3.3 and 7.3.4 and any special in-depth needs.

21.7.5.4.1. (Added) The criteria and methods of evaluation should also be established.

21.7.5.5. (Added) The last step is the ongoing evaluation of auditor performance and continuing professional development. This evaluation is performed, as are the others, against criteria established by audit program management.

21.7.5.6. (Added) At any of the evaluations described above, the conclusion may be reached that the person does not have the competence to perform as an auditor and appropriate actions may be necessary. It may also be an advantage to the audit program to rotate auditors' responsibilities.)

21.8. (Added) Internal Audit Process:

21.8.1. (Added) Audit Schedule:

21.8.1.1. (Added) The 309 MXW/QPP lead auditor is responsible for managing the operation of the wing internal audit program and for developing and publishing the audit schedule.

21.8.2. (Added) Establishing initial contact with the auditee: The initial contact for the audit with the auditee can be informal or formal, but should be made by those assigned responsibility for managing the audit program or the audit team leader. The purpose of the initial contact is to:

21.8.2.1. (Added) Establish communication channels with the auditee's representative,

21.8.2.2. (Added) Confirm the authority to conduct the audit,

21.8.2.3. (Added) Provide information on proposed timing and audit team composition,

21.8.2.4. (Added) Request access to relevant documents, including records,

21.8.2.5. (Added) Determine applicable site safety rules,

21.8.2.6. (Added) Make arrangements for the audit, and

21.8.2.7. (Added) Agree on the attendance of observers and the need for guides for the audit team.

21.8.3. (Added) Audit Planning:

21.8.3.1. (Added) Planning is based on the importance, objectives and scope of the intended audit. Consideration is given to the clauses, the processes involved, and the impact on the organization to be audited.

21.8.3.2. (Added) As necessary, a review of local and higher level instructions, policy letters, process orders and previous audit reports and/or management reviews pertaining to the area and process to be audited is included in the audit planning.

21.8.3.3. (Added) When determined necessary, develop additional checklists necessary to address the pertinent process requirements.

21.8.3.4. (Added) The audit team leader should prepare an audit plan to provide the basis for the agreement among the audit client, audit team, and auditee regarding the conduct of the audit. The plan should facilitate scheduling and coordination of the audit activities.

21.8.3.5. (Added) The amount of detail provided in the audit plan should reflect the scope and complexity of the audit. The details may differ, for example, between initial and subsequent audits.

21.8.3.6. (Added) The audit plan should be sufficiently flexible to permit changes, such as changes in the audit scope which can become necessary as the on-site audit activities progress.

21.8.3.7. (Added) The audit plan should also cover the:

21.8.3.7.1. (Added) Audit objectives;

21.8.3.7.2. (Added) Audit criteria and any reference documents;

21.8.3.7.3. (Added) Audit scope, including the identification of the organizational and functional units and processes to be audited;

21.8.3.7.4. (Added) Dates and places where the on-site audit activities are to be conducted;

21.8.3.7.5. (Added) Expected time and duration of on-site audit activities, including meetings with the auditee's management and audit team meetings;

21.8.3.7.6. (Added) Roles and responsibilities of audit team members and accompanying persons;

21.8.3.7.7. (Added) Allocation of appropriate resources to critical areas of the audit.

21.8.3.7.8. (Added) Identification of the auditee's representative for the audit;

21.8.3.7.9. (Added) Working and reporting language of the audit where this is different from the language of the auditor and/or the auditee;

21.8.3.7.10. (Added) Audit report topics;

21.8.3.7.11. (Added) Logistic arrangements (travel, on-site facilities etc.);

21.8.3.7.12. (Added) Matters related to confidentiality;

21.8.3.7.13. (Added) Any audit follow-up actions.

21.8.3.7.14. (Added) The plan should be reviewed and accepted by the audit client, and presented to the auditee, before the on-site audit activities begin. Any objections by the auditee should be resolved between the audit team leader, the auditee and the audit client. Any revised audit plan should be agreed among the parties concerned before continuing the audit.

21.8.4. (Added) Conducting document review

21.8.4.1. (Added) Before audit activities, the organization's documentation should be reviewed to determine the conformity of the system as documented, with audit criteria. The documentation may include relevant management system documents, records and previous audit reports. The review should take into account the size, nature and complexity of the organization, the objectives and scope of the audit.

21.8.4.2. (Added) If the documentation is found to be inadequate, the audit team leader should inform the audit client, those assigned responsibility for managing the audit program, and the auditee. A decision should be made whether the audit should be continued or suspended until documentation concerns are resolved.

21.8.5. (Added) Audit Team Formation:

21.8.5.1. (Added) The wing lead auditor selects the audit team members and observers as appropriate for the audit concerned.

21.8.5.2. (Added) In deciding the size and composition of the audit team, consideration should be given to the following:

21.8.5.2.1. (Added) Audit objectives, scope, criteria and estimated duration of the audit;

21.8.5.2.2. (Added) Whether the audit is a combined or joint audit;

21.8.5.2.3. (Added) The overall competence of the audit team needed to achieve the objectives of the audit;

21.8.5.2.4. (Added) Statutory, regulatory, contractual, and accreditation/certification requirements, as applicable;

21.8.5.2.5. (Added) The need to ensure the independence of the audit team from the activities to be audited and to avoid conflict of interest.

21.8.5.3. (Added) The process of assuring the overall competence of the audit team should include the following steps:

21.8.5.3.1. (Added) Identification of the knowledge and skills needed to achieve the objectives of the audit;

21.8.5.3.2. (Added) Selection of the audit team members such that all of the necessary knowledge and skills are present in the audit team.

21.8.5.3.3. (Added) If not fully covered by the auditors in the audit team, the necessary knowledge and skills can be satisfied by including technical experts or subject matter experts (SME). Technical experts and SME's should operate under the direction of an auditor. Auditors-in-training may be included in the audit team, but should not audit without direction or guidance.

21.8.5.4. (Added) Request the group's POC arrange for SME to accompany the audit team to specific areas where the lead auditor has determined assistance is required.

NOTE: (Added) Audit team members cannot audit their own workload responsibilities.

21.8.6. (Added) Opening Meeting:

21.8.6.1. (Added) Unless otherwise directed, always conduct an opening and closing meeting with the leadership of the area to be audited. The opening meeting should be chaired by the audit team leader, and the following items should be confirmed, if appropriate:

21.8.6.1.1. (Added) Introduction of the participants, and an outline of their roles;

21.8.6.1.2. (Added) Audit objectives, scope and criteria;

21.8.6.1.3. (Added) Audit timetable and other relevant arrangements with the auditee, such as the date and time for the closing meeting, any interim meetings between the audit team and the auditee's management, and any late changes;

21.8.6.1.4. (Added) Methods and procedures to be used to conduct the audit, including advising the auditee that the audit evidence will only be based on a sample of the information available, and that therefore there is an element of uncertainty in auditing;

21.8.6.1.5. (Added) Confirmation of formal communication channels between the audit team and the auditee;

21.8.6.1.6. (Added) Language to be used during the audit;

21.8.6.1.7. (Added) The auditee will be kept informed of audit progress;

21.8.6.1.8. (Added) Resources and facilities needed by the audit team are available;

21.8.6.1.9. (Added) Matters relating to confidentiality;

21.8.6.1.10. (Added) Relevant work safety, emergency and security procedures for the audit team;

21.8.6.1.11. (Added) Availability, roles and identities of any guides;

21.8.6.1.12. (Added) The method of reporting, including any grading of non-conformities;

21.8.6.1.13. (Added) Information about conditions on which the audit may be terminated;

21.8.6.1.14. (Added) Information about any appeal system on the conduct or conclusions of the audit.

21.8.7. (Added) Communications during the audit

21.8.7.1. (Added) Depending upon the scope and complexity of the audit, it may be necessary to make formal arrangements for a method of communications with the audit team and with the auditee during the audit.

21.8.7.2. (Added) The audit team should confer periodically to exchange information, assess audit progress, and to reassign work between the audit team members as needed.

21.8.7.3. (Added) During the audit, the audit team leader should periodically communicate the status of the audit and any concerns to the auditee and/or audit client, as appropriate.

21.8.7.4. (Added) Evidence collected that suggests an immediate and significant risk (e.g. safety, environmental or quality) should be reported without delay to the auditee and, as appropriate, to the audit client.

21.8.7.5. (Added) Any concern about an issue outside the audit scope should be noted and reported to the audit team leader, for possible communication to the audit client and auditee.

21.8.7.6. (Added) Where the available audit evidence indicates that the audit objectives are unattainable, the audit team leader should report the reasons to the audit client and the auditee to determine the appropriate actions to be taken.

21.8.7.7. (Added) Such action can include reconfirmation or modification of the audit plan, changes to the audit objectives or audit scope, or termination of the audit.

21.8.7.8. (Added) Any need for changes in the audit scope which become apparent as on-site auditing activities progress should be reviewed with and approved by the audit client and, as appropriate, the auditee.

21.8.8. (Added) Audit Findings:

21.8.8.1. (Added) Conduct interviews with personnel involved in the process concerned and evaluate the process being performed as well as associated records as scheduled with the auditee's representative.

21.8.8.2. (Added) Ensure objective evidence is documented for the clauses audited. Objective evidence collected will be identified by location, date, clause and any other information necessary to ensure the evidence is traceable for audit tracking.

21.8.8.3. (Added) Evaluate findings with the lead auditor, the POC of the group being audited and the process owner to determine the most practicable way to document the findings in the C/PAR system.

21.8.8.4. (Added) Plan coordination with other groups in attempting to verify if the finding is or is not a systemic problem that is occurring in other groups.

21.8.8.5. (Added) Consider possible consolidation of similar findings, selection of appropriate process owners to which the C/PAR will be assigned, and discuss possible recommendations for resolution.

21.8.9. (Added) Preparing audit conclusions:

21.8.9.1. (Added) Audit conclusions can address issues such as the:

21.8.9.1.1. (Added) Extent of conformity of the management system with the audit criteria,

21.8.9.1.2. (Added) Effective implementation, maintenance and improvement of the management system,

21.8.9.1.3. (Added) Capability of management review process to ensure the continuing suitability, adequacy, effectiveness and improvement of the management system.

21.8.9.1.4. (Added) If specified by the audit objectives, audit conclusions can lead to recommendations regarding improvements, business relationships, certification/registration or future auditing activities.

21.8.10. (Added) Conducting the closing meeting:

21.8.10.1. (Added) A closing meeting, chaired by the audit team leader, should be held to present the audit findings and conclusions in such a manner that they are understood and acknowledged by the auditee, and to agree if appropriate, on the timeframe for the auditee to present a corrective and preventive action plan.

21.8.10.2. (Added) Participants in the closing meeting should include the auditee and may also include the audit client and other parties. If necessary, the audit team leader should advise the auditee of situations encountered during the audit that may decrease the reliance that can be placed on the audit conclusions. In many instances, for example internal audits in a small organization, the closing meeting can consist of communicating the findings and conclusions of the audit.

21.8.10.3. (Added) For other audit situations, the meeting should be formal and minutes, including records of attendance, should be kept. Any diverging opinions relative to audit findings and/or conclusions between the audit team and the auditee should be discussed and if possible resolved. If not resolved, all opinions should be recorded.

21.8.10.4. (Added) If specified by the audit objectives, recommendations for improvements should be presented. It should be emphasized that recommendations are not binding.

21.8.11. (Added) Preparing the audit report: The wing lead auditor will consolidate, prepare and distribute the audit report.

21.8.11.1. (Added) Deviations from the stated audit objectives will be noted with an explanation by the lead auditor.

21.8.11.2. (Added) Objective evidence pertaining to findings will be identified and traceable.

21.8.11.3. (Added) The audit report will be a complete, accurate, concise, and unambiguous record of the audit, and should include or refer to the following:

21.8.11.3.1. (Added) Audit objectives;

21.8.11.3.2. (Added) Audit scope, particularly the identification of the organizational and functional units or processes audited and the time period covered;

21.8.11.3.3. (Added) Identification of the audit client;

21.8.11.3.4. (Added) Identification of audit team leader and members;

21.8.11.3.5. (Added) Dates and places the on-site audit activities were conducted;

21.8.11.3.6. (Added) Audit criteria;

21.8.11.3.7. (Added) Audit findings;

21.8.11.3.8. (Added) Audit conclusions.

21.8.11.4. (Added) The audit report may also include or refer to the following, as appropriate:

21.8.11.4.1. (Added) Audit plan;

21.8.11.4.2. (Added) A list of auditee representatives;

21.8.11.4.3. (Added) A summary of that could decrease the reliability of the audit conclusions;

21.8.11.4.4. (Added) Confirmation that the audit objectives have been accomplished within the audit scope in accordance with the audit plan;

21.8.11.4.5. (Added) Any unresolved diverging opinions between the audit team and the auditee;

21.8.11.4.6. (Added) Recommendations for improvement, if specified in the audit objectives;

21.8.11.4.7. (Added) Agreed follow-up action plans, if any;

21.8.11.4.8. (Added) A statement of the confidential nature of the contents;

21.8.11.4.9. (Added) The distribution list for the audit report.

21.8.12. (Added) Distribute the audit report: The audit report should be issued within the agreed time period. If this is not possible, the reasons for the delay should be communicated to the audit client and a new issue date should be agreed.

21.8.12.1. (Added) The audit report should be dated, reviewed and approved as defined in audit program procedures.

21.8.12.2. (Added) The approved audit report should then be distributed to recipients designated by the audit client.

21.8.12.3. (Added) The audit report is the property of the audit client.

21.8.12.4. (Added) The audit team members and all report recipients should respect and maintain the confidentiality of the report.

21.8.13. (Added) Completing the audit: The audit is completed when all activities described in the audit plan have been carried out and the approved audit report has been distributed.

21.8.13.1. (Added) Documents pertaining to the audit should be retained or destroyed by agreement between the participating parties, and IAW audit program procedures and applicable statutory, regulatory, and contractual requirements.

21.8.13.1.2. (Added) Unless required by law, the audit team and those responsible for managing the audit program should not disclose the contents of documents, any other information obtained during the audit, or the audit report, to any other party without the explicit approval of the audit client and, where appropriate, the approval of the auditee. If disclosure of the contents of an audit document is required, the audit client and auditee should be informed as soon as possible.

21.8.14. (Added) Conducting audit follow-up:

21.8.14.1. (Added) The conclusions of the audit may indicate the need for corrective, preventive or improvement actions, as applicable. Such actions are usually decided and undertaken by the auditee within an agreed timeframe and are not considered to be part of the audit. The auditee should keep the audit client informed of the status of these actions.

21.8.14.2. (Added) The completion and effectiveness of corrective action should be verified. This verification can be part of a subsequent audit.

21.8.14.3. (Added) The audit program may specify follow-up by members of the audit team, which adds value by using their expertise. In such cases, care should be taken to maintain independence in subsequent audit activities.

21.9. (Added) Audit Records:

21.9.1. (Added) Lead Auditor will maintain a record of all AS9100C/AS9110A internal audits performed by the wing quality office.

21.9.2. (Added) The 309 MXW/QPP C/PAR coordinator (CPAC) will monitor all entries into the C/PAR system and ensure process owners are aware of assigned C/PARs.

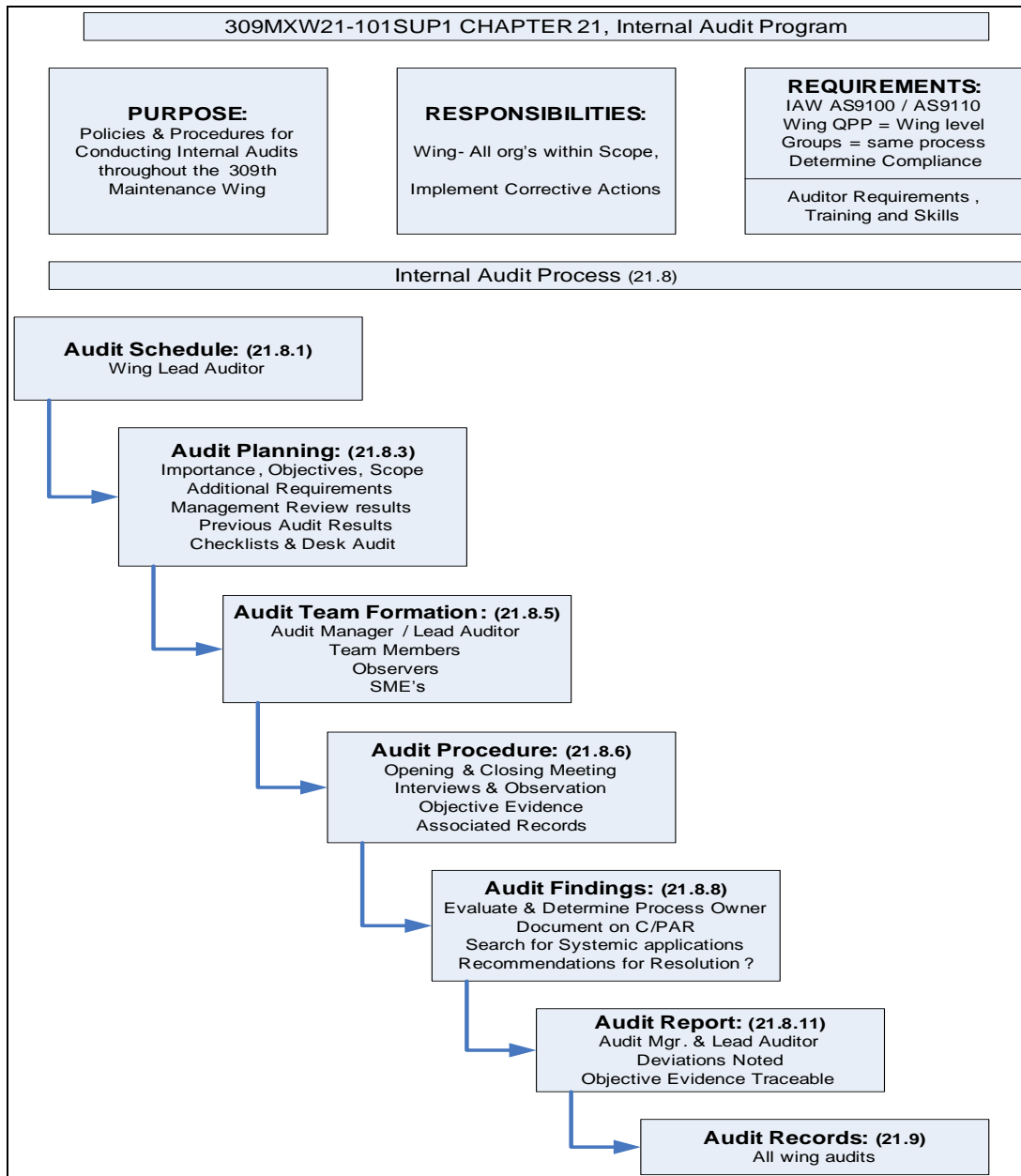
21.9.3. (Added) Either the AS9100/9110 Program Manager or the C/PAR coordinator will approve or disapprove all C/PARS at the wing level based upon compliance with the AS9100/AS9110 standard.

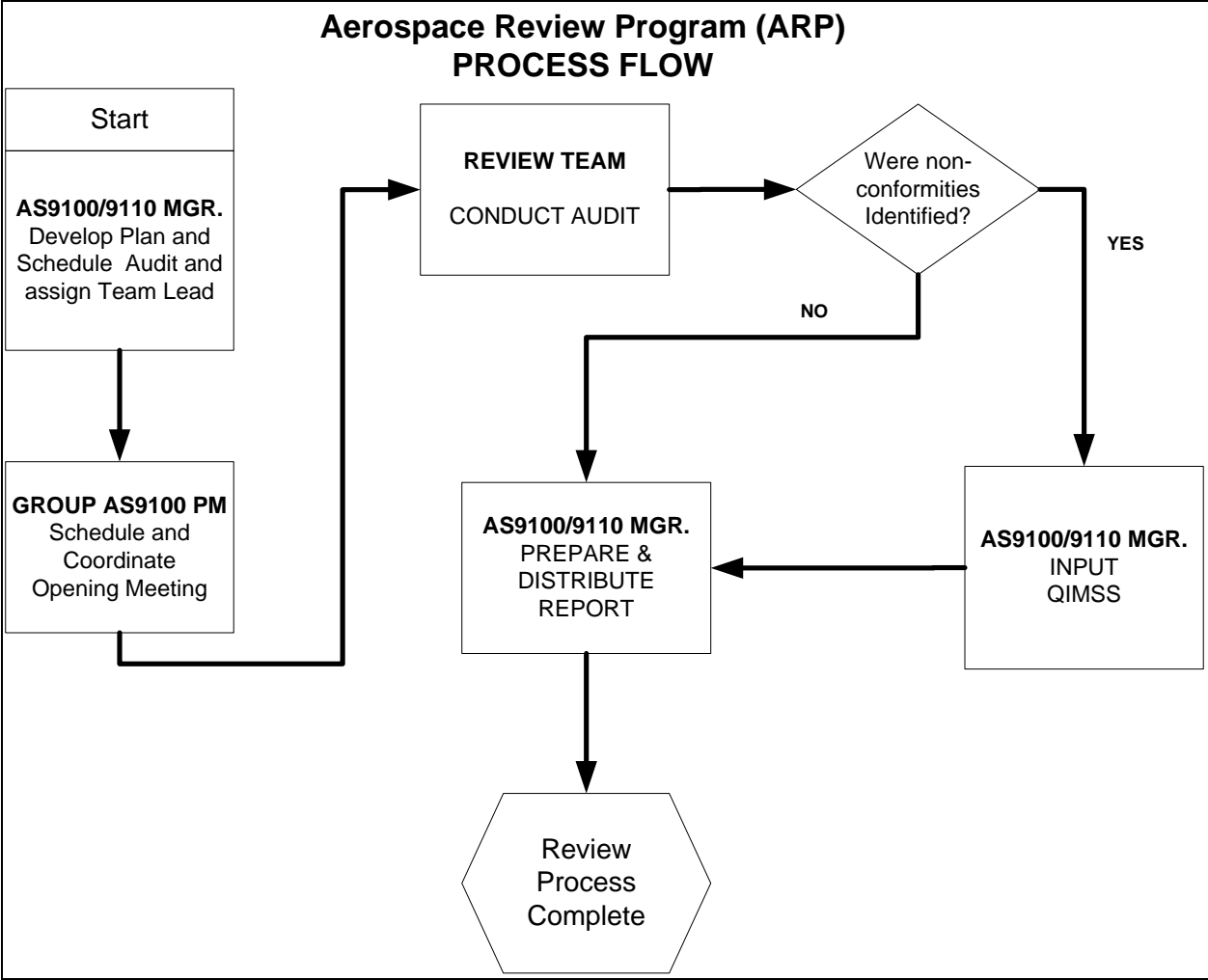
21.10. (Added) 309 AMARG Procedures

21.10.1. (Added) The AS9100C/AS9110A POC at 309 AMARG is responsible for planning, conducting, documenting and reporting internal audits at 309 AMARG.

21.10.2. (Added) All audit activities will be coordinated with and copies of all completed audit documentation will be forwarded to the 309 MXW/QPP AS9100C/9110A Program Manager at Hill AFB.

Attachment A21.1. (Added)





(Added) Chapter 22

(Added) 309 MXW Corrective/Preventive Action Request Program

(Added) Corrective Action Request (CAR)-Preventive Action Request (PAR)

22. (Added) This chapter describes policies, guidance, procedures and responsibilities for operation of the wing C/PAR program.

22.1. (Added) Objective: The elimination of identified or potential product and process non-conformances.

22.2. (Added) Scope: All 309 MXW organizations.

22.3. (Added) References: All references, definitions and acronyms are listed in Attachment 1, *Glossary of References and Supporting Information*.

22.4. (Added) Responsibilities:

22.4.1. (Added) Initiator: Identifies, defines and documents the nonconformance relating to a process, product or system deficiency.

22.4.2. (Added) Overall Process owner: In each production group the deputy director/commander is the designated management representative for AS9100/AS9110 and thus is the overall process owner for his/her respective group.

22.4.2.1. (Added) Ensures all requested root cause analyses and action plans are submitted by the date specified on the CAR or PAR.

22.4.2.2. (Added) Ensures corrective action plans are implemented by specified date.

22.4.3. (Added) Specific process owner:

22.4.3.1. (Added) Will be the supervisor responsible for any specific process.

22.4.3.2. (Added) Determines the root cause of nonconformities occurring in a process within that individual's area of responsibility, (see OODA LOOP attachment.)

NOTE: (Added) A similar nonconformance discovered in a different organizational area should be evaluated for systemic concerns and subsequent CAR/PAR issuance if appropriate.

22.4.3.3. (Added) Develops the action plan needed to resolve the problem specified on the CAR. (See Para. 22.5)

22.4.3.3.1. (Added) Obtains approval of the proposed action plan by the group management representative.

22.4.3.3.2. (Added) Then obtains approval of the action plan from the wing CPAC.

NOTE: If the action plan submitted is disapproved, the estimated completion date first submitted will not change unless an extension is requested and approved.

22.4.3.3.3. (Added) Implements the action plan,

22.4.3.3.4. (Added) Responsible for ensuring suspense dates are met or a request for extension is submitted to the CPAC prior to the suspense.

NOTE: If the action plan implementation is not completed by the estimated completion date the C/PAR will be delinquent unless an extension is requested and approved by the CPAC.

22.4.4. (Added) CPAC:

22.4.4.1. (Added) Verification of action plan implementation and adequacy will be accomplished by the wing CPAC, or wing audit manager or a QAS in conjunction with the appropriate group AS9100 POC prior to closure of any CAR/PAR. This verification will ensure that the documented action has been accomplished and meets the intent of the AS9100C/AS9110A standard and the actions taken appear to be effective and sufficient to prevent a recurrence of the nonconformance.

22.4.4.2. (Added) If it becomes apparent during verification that the documented action plan is insufficient or incomplete, the CAR/PAR will be disapproved and returned to the process owner or deputy for revision.

22.4.4.3. (Added) After verification that the implemented plan is satisfactory, approval of the plan is noted in the IDS database and the CAR then may be closed out by the CPAC or internal audit program manager.

22.4.4.4. The status of all open CAR/PARs will be tracked by the CPAC in IDS and reported at wing management review meetings by the AS9100/9110 Program manager.

NOTE: At any step in the process if the action plan is not approved or is found lacking it will be returned to the process owner.

22.4.4.5. (Added) If the process owner disputes a CAR (i.e. inappropriate or incorrectly assigned), a request for reconsideration may be made to the initiator and/or wing AS9100 program manager with appropriate justification. Unresolved disputes shall be escalated to the next higher appropriate approving authority within the office issuing the CAR.

22.4.4.6. (Added) If more specific instructions are required for this corrective and preventive action process, they will be developed at the group or squadron level and will be based on this procedure.

22.4.4.7. (Added) The CPAC will provide trend analysis related to the corrective/preventive action process as needed for appropriate management review.

22.5. (Added) Action Plans:

22.5.1. (Added) Response to the CAR will be made by the process owner within 15 days from the time of CAR issuance.

22.5.1.1. (Added) At any time within the 15 day period, the process owner may request a time extension via email to the wing AS9100 Program manager or the CPAC with an information copy to the group's AS9100 POC. All requests for extension will include sufficient justification and corresponding milestones to support the request.

22.5.1.2. (Added) The wing AS9100 program manager or CPAC may approve, disapprove or modify a first time request.

22.5.1.3. (Added) If the action plan has not been submitted within 15 days of CAR issuance, and an extension has not been granted, a notification via email will be sent to the process owner requesting submission of the action plan within 5 working days. Copies of the notification will also be sent to the following individuals: Process owner's immediate supervision, 309 MXW/QP, and group QP chief.

22.5.1.4. (Added) If after 5 days the action plan has not been submitted, a final notification will be sent via email to the process owner and the individuals listed above with the addition of the group's director and the 309 MXW AS9100/9110 Management Representative (wing deputy director). Further action regarding the CAR will be determined by the management representative.

22.5.1.5. (Added) The wing AS9100 Program manager or CPAC will enter in the comment section of the C/PAR; copies of any notification letters sent.

22.5.1.6. (Added) In the event that timely and/or effective corrective actions are not achieved, additional requests for time extensions are escalated to an appropriate approving authority within the office issuing the C/PAR or if appropriate, to the group or wing AMS management representative for action.

22.5.1.7. (Added) When as a result of causal analysis, it is determined that a supplier is responsible for the root cause, a flow down of the corrective action to the responsible supplier will be done as part of the action plan and the results forwarded through appropriate channels to that supplier.

22.5.1.8. (Added) A follow-up check of each action plan's implementation will be scheduled by the lead auditor or wing AS9100 program manager within an adequate time (i.e. 90-180 days) after verification of the C/PAR. All such follow up actions will be recorded.

22.5.1.9. (Added) The 309 MXW/QP, *Corrective/Preventive Action Request* is maintained as a record of the results of actions taken.

Chapter 23 (Added) Forms adopted or prescribed:

23.1. (Added) Prescribed Forms.

309 MXW Form 234, *ESD Work Area Survey/Certification Certificate*

309 MXW Form 234-1, *90 Day Soldering Station ESD Test*

309 MXW Form 234-2, *ESD Wrist Strap Daily Check*

309 MXW Form 234-A, *Electrostatic Discharge (ESD) Control Report of Annual Survey*

309 MXW Form 535, *Government Library Technical Order Distribution Requirements*

309 MXW Form 536, *Technical Order (TO) Library Custodian Appointment/Change*

23.2. (Added) Adopted Forms.

AF Form 1151, *Training Rating*

AF Form 1534, *CEM CDB Report*

AF Form 2519 V-5, *Equipment Impoundment Worksheet.*

AF Form 2692, *Aircraft Missile Equipment Transfer/shipping Listing*

AF Form 290, *Aerospace Vehicle Delivery Receipt*

AF Form 3126, *General Purpose (8-1/2" X 11")*

AF Form 3136, *General Purpose (11" X 8-1/2")*

AF Form 388, *Communication Control Record*

AF Form 55, *Employee Safety and Health Record*

AF Form 847, *Recommendations for Change of Publication*

AFMC Form 134, *PME Scheduling Record*

AFMC Form 135, *PME Status*

AFMC Form 137, *Routed Order (Project Directed)*

AFMC Form 173, *PDMSS Work Control Document (WCD) Computer Generated*

AFMC Form 181, *Project Order*

AFMC Form 202, *Nonconforming Technical Assistance Request*

AFMC Form 206, *Temporary Work Request*

AFMC Form 299, *Safety, Bioenvironmental, Environmental and Fire Protection Review Process*

AFMC Form 306, *Preventive Maintenance Instructions*

AFMC Form 316, *Supervisor Safety Meeting Minutes*

AFMC Form 343, *Quality Assurance Assessment*

AFMC Form 355, *Operator Maintenance Certification.*

AFMC Form 500, *WCD Production Planning Team Checklist*

AFMC Form 561, *Process Order*

AFMC Form 74, *Nondestructive Inspection Personnel Qualification and Certification Record*.
AFMC Form 77, *Request for Quality Assistance (RQA)*
AFMC Form 79, *Customer Feedback*
AFMC Form 94, *Reversal Transaction*
AFMC Form 95, *Issue Request*
AFMC Form 957, *Work Control Document Change Request*
AFMC Form 959, *Work Control Document*
AFTO Form 103, *Aircraft/Missile Condition Data*
AFTO Form 110, *Technical Order/CPIN Distribution Record*
AFTO Form 157, *Computer Program Configuration Item (CPCI) Requirement*
AFTO Form 249, *TMDE Calibration Data*
AFTO Form 290, *Aerospace Vehicle Delivery Receipt*
AFTO Form 398, *Limited TMDE Certification*
AFTO Form 45, *Request for Calibration Responsibility Determination*
AFTO Form 471, *Electronic Set Inventory Checklist Configuration Data*,
AFTO Form 95, *Significant Historical Data*
AFTO Form 99, *Limited/Special TMDE Certification*
DD Form 1131, *Cash Collection Voucher*
DD Form 1149, *Requisition and Invoice/Shipping Document*,
DD Form 1348-1A, *Issue/Turn-In Request*
DD Form 1577, *Unserviceable (Condemned) Tag Material*
DD Form 200, *Financial Liability Investigation of Property Loss, (FLIPL)*
DD Form 2026, *Oil Analysis Request*,
DD Form 2027, *Oil Analysis Record*,
DD Form 2875, *System Authorization Access Request*
DD Form 365-4, *Weight and Balance Clearance Form F*
Hill AFB Form 529, *Hand Tool Back Order Receipt*
Hill AFB Form 515, *Tool Request/ Turn In*
Hill AFB Form 516, *Establish or Revise Tool Listings*
OPNAV 4790/104, *Aircraft Inventory Record*
OPNAV 4790/112, *Aircraft Inventory Record Shortage*
OPNAV 4790/136 & 136A, *Preservation/Depreservation Divider, Preservation/ Depreservation Record*

OPNAV 4790/18, *Aircraft Non-Aging Record*

OPNAV 4790/21& 21A, *Flight Divider/ Monthly Flight Summary*

OPNAV 4790/22 & 22A, *Inspection Divider/Inspection Record*

OPNAV 4790/23 & 23A, *Repair/Rework Divider/Repair/Rework Record*

OPNAV 4790/25 & 25A, *Miscellaneous/History Divider/Miscellaneous/History*

OPNAV 4790/26 & 26A, *Explosive Devices Divider/Installed Explosive Device Record*

OPNAV 5442/9, *Aircraft Record A.*

Safety (SE) Form 2, *Operational Risk Management Assessment*

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

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Abbreviations, Acronyms

ABS – AMARG Business System

ACO – Administrative Contracting Officer

AEMS - Aerospace Engine Management System

AFGE - American Federation of Government Employees

AFK - Munitions Supply

AFOSH – Air Force Occupational & Safety

AGE - Aerospace Ground Equipment

ALEP—Annual List of Effective Pages

ALS – Aircraft Logistics Specialists

AMARG – Aircraft Maintenance and Regeneration Group

AMXG – Aircraft Maintenance Group

ANSI - American National Standards Institute

AOR – Area of Responsibility

APU – Auxiliary Power Unit

AQL - Acceptable Quality Level

ARMS - Aviation Resource Management System

ARR – Account Reconciliation Report

ASQ – Aerospace Standard Quality

ATOMS - Automated Technical Order Management System

AVDO – Aerospace Vehicle Distribution Officer

AWDS - Automated Weather Distribution Systems

AWP – Awaiting Parts

BUNO – Bureau Number

CA/CRL - Custodian Authorization/Custody Receipt Listing

CAMS - Core Automated Maintenance System

CA/PA - Corrective/Preventive Action

CAR – Corrective Action Request
CCD – Course Control Documents
CCI - Compromised Component Integrity
CCP – Command Control Point
CDB – Computerized Data Base
CDR – Contract Discrepancy Report
CEG/CEFT - Fire Protection Engineering
CEMS – Comprehensive Engine Management System
CFM - Contract Functional Manager
CLSS – Combat Logistics Support Squadron
CM – Contract Manager
CMO – Contract Management Office
CMXG - Commodities Maintenance Group
CO – Contracting Officer
COTS – Commercial of the Shelf
CPAC – C/PAR Coordinator
CPAR - Contractor Performance Assessment Report
C/PAR - Corrective/Preventive Action Request
CPCI – Computer Program Configuration Items
CPIN–Computer Program Identification for Numbering
CPIT – Continual Process Improvement Team
CRL – Custody Receipt Listing
CSD – Constant Speed Drive
CSRL – Code Selected Reconciliation List
CTK - Consolidated Tool Kit
CTOM - Center Technical Order Management
DEMIL – Demilitarization
DFT – Depot Field Team
DIFMS – Defense Industry Financial Management System
DIFR - Due In for Repair
DMAFB – Davis-Monthan Air Force Base
DMAG - Depot Maintenance Activity Group

DMAWG – Depot Maintenance Activation Working Group
DOCAT - Depot On-Site Contractor Augmentee Team
DRIS - Deficiency Reporting and Investigating System
DRMO – Defense Reutilization and Marketing Office
DR – Deficiency Report
DREP – Depot Repair Enhancement Program
DSV - Detected Safety Violation
DT&S – Dimensions, Tolerances and Specifications
DTK – Dispatchable Tool Kit
E&E – Examination and Evaluation
E&I – Evaluations and Inspection
eChit - Electronic Chit
ECS – Embedded Computer Systems
EIM – Engine Item Manager
EM – Engine Manager
EMXG – Electronics Maintenance Group
EN - Engineering Office Supervisor
ENV – Environmental
ENX - Project Engineer
EOS - Electrical Overstress
EPE - Evaluator Proficiency Evaluation
EPP – EXPRESS Prioritization Processor
EPSM – Engine Propulsion System Module
EPU - Emergency Power Unit
ESDS - Electrostatic Discharge Sensitive
ET – Eddy Current
ETMS - Education Training Management System
ETR – Electronic Training Record
EXPRESS – Execution and Prioritization of Repair Support System
DIT – Data Input Technician
DREP – Depot Repair Enhancement Program
FAI – Full Article Inspection

FC – Functional Commander
FCF – Functional Check Flight
FD – Functional Director
FEMs – Facility and Equipment Maintenance System
FMS – Forth Worth Military Specifications
FO – Foreign Object
FOD - Foreign Object Damage
FP – Focal Point
FPO – Forth Worth Process Specifications
FSO - Flight Safety Office
FT – Flight Test
GBL – Government Bill of Lading
GOCO TODO - Government Owned Contractor Operated Technical Order Distribution Office
GSU – Geographically Separated Unit
HT – How To
IAW - In accordance with
ICS – Intercom System
ID - Identification Number
IFE – In flight Emergency
IMDB - Integrated Missile Database
IMDS – Integrated Maintenance Data System
IMIS - Integrated Maintenance Information System
INFOCEN - Information Central
IPT - Integrated Process Team
IRT – Thermography
ISA – Inter-Service Agreement
ISO - International Standard Organization
ITK - Individual Tool Kit
JCALs – Joint Computer-aided Acquisition and Logistics Support
JDRS - Joint Deficiency Reporting System
JEIM – Jet Engine Intermediate Maintenance
JOAP – Joint Analysis Program

JON – Job Order Number
LCL –Local Check List
LEP – List of Effected Pages
LM/MT - Locally Manufactured/Modified Tool
LMR – Land Mobile Radios
LOA – Lost on Aircraft
LSEP - Logistics Standardization and Evaluation Program
LSET - Logistics Standardization and Evaluation Team
LWC – Local Work Card
MAPT – Maintenance Activation Planning Team
MATO – Special Assets Branch
MDS – Mission Design Series
MEO – Most Efficient Organization
MFT - Multi Functional Team
MGT/CD – Management Code
MIC - Material Inventory Centers
MI - Management Inspections
MIS - Management Information System
MISTR – Management Items Subject to Repair
MLA – Master Labor Agreement
MLG – Main Landing Gear
MM – Materiel Manager
MMTRS - Missile Motor Tracking and Reporting System
MMXG – Missile Maintenance Group
MOD - Modification
MRO - Material Repair and Overhaul
MRRB – Maintenance Requirements Review Board
MRT – Maintenance Review Team
MSEP – Maintenance Standard Evaluation Program
MSP - Miscellaneous Small Parts
MT – Magnetic Particle
MWR – Maintenance Work Request

MXW – Maintenance Wing
NAMDRP - Naval Aviation Maintenance Discrepancy Reporting Program
NAS - National Aerospace Standard
NAVAIR - Naval Air Systems Command
NDI – Non Destructive Inspection
NGI – Normal Ground Idle
NICA - Not in Compliance Areas
NLG – Nose Landing Gear
NLOA - Not Lost On Aircraft
NPR – Non Project Required
NR – Non Rated
NSN - National Stock Number
O&A – Over and Above
O&M - Operation and Maintenance
O.I. POC - Oversight Inspection Point of Contacts
OAP – Oil Analysis Program
OC–ALC - Oklahoma Air Logistics Center
OI - Oversight Inspections
OJT – On The Job Training
OO - ALC—Ogden Air Logistics Center
OO - ALC/EM - Directorate of Environmental Management
OO - ALC/SEG - Ground Safety Office
OPR - Office of Primary Responsibility
OPX – Operations Cancel
ORM – Operational Risk Management
OSI – Oversight Inspection
OTX – Other Cancel
P&A – Price and Availability
PA - Planned Action
PAC/TSS - Production Acceptance Certification/Training Scheduling System
PACSS - Production Acceptance Certification Standard System
PAMS – PMEL Automated Management System

PAO – Public Affairs Office
PAP – Predetermined Acceptance Probability
PAR – Preventive Action Request
PBSA – Performance Based Service Acquisitions
PBWS – Performance Based Work Statement
PCN – Product Control Number
PCO – Procurement Contracting Officer
PCR - Publication Change Request
PCW – Previously Complied With
PDM – Program Depot Maintenance
PDMSS – Programmed Depot Maintenance Scheduling System
PE – Personal Evaluation
PIM - Product Improvement Manager
PIN – Personal Identification Number
PMA - Portable Maintenance Aid
PMAP - Performance Management Assessment Program
PME - Precision Measurement Equipment
PMEL - Precision Measurement Equipment Lab
PMR – Program Management Review
POC – Point of Contact
PODDS – Process Order Development and Display System
POUS – Point of Use Station
PPE - Personal Protective Equipment
PPP – Public-Private Partnership
PPPT – Pre-production Planning Team
PQDR – Product Quality Deficiency Report
PR – Project Required
PSC – Production Support Crib
PT – Liquid Penetrant
PWO – Production Work Orders
PWS –Performance Based Work Statement (PWS)
QA - Quality Assurance
QAE – Quality Assurance Evaluator

QAP - Quality Assurance Plan
QAPC – Quality Assurance Program Coordinator
QAR – Quality Assessment Rating
QAS – Quality Assurance Specialist
QASP - Quality Assurance Surveillance Plan
QC - Quality Control
QDR – Quality Deficiency Report
QIMSS – Quality Information Management Standard System
QP - Quality Program
QRB – Quality Review Board
QVI – Quality Verification Inspection
RA – Resource Advisor
RAD - Radiation
RADIAC – Radiation Detection Equipment
RCC – Resource Center Code
RDS – Records Disposition Schedule
RFD – Ready for Delivery
RFQ – Request for Quote
RIL – Routine Inspection List
ROS - Report of Survey
RQA - Request For Quality Assistance
RSO – Radiation Safety Officer
RT - Radiography
RTR – Recurrent Training Requirements
SAI – Satisfactory As Is
SARDIP - Navy Stricken Aircraft Reclamation Disposal Project
SE - Safety
SGB - Bioenvironmental Engineering
SGB - Bioenvironmental Engineering
SM – Single Manager
SME - Subject matter expert
SMXG – Software Maintenance Group

S/N – Serial Number
SO – Sales Order
SOF – Supervisor of Flying
SOJT – Structured On the Job Training
SOR – Source of Repair
SOW – Statement of Work
SPO – System Program Office
SRAN – Supply Record Account Number
SS - Services Summary
SSC - Shop Support Centers
SSPO - System Safety Program Officer
SSQ – Special Skills Qualification
ST – Shearography
START - Strategic Arms Reduction Treaty
TAA – Time and Attendance
TAO - Technical Assistance Organization
TCM - Tool Control Manager
TCTO - Time Compliance Technical Order
TDPO – Technical Data Program Office
TDV - Technical Data Violation
TDY - Temporary Duty Yonder
TK - Tool Kit
TKCRL - Tool Kit Custody Receipt Listing
TMDE - Test Measurement Diagnostic Equipment
TO - Technical Order
TODA - Technical Order Distribution Account
TODO - Technical Order Distribution Office
TOMA - Technical Order Management Agency
TOTK – Task Oriented Tool Kit
TRE - Transfer Reporting Equipment
UHF – Ultra High Frequency
UT – Ultra Sonic

UTL – Unique Tool Listing

WAD – Work Authorization Document

WAWF – Wide Area Work Flow

WCD – Work Control Document

WLM – Workload Manager

309 MXW/OBMT – Maintenance Training Flight

Terms

AFRIMS: Air Force Records Information Management System

Auditor: An individual who reviews NDT facilities and general procedures for compliance to NDT technical requirements.

Certification: A written statement by an employer that an individual has met the applicable requirements of this standard.

Chits: Numbered tags, manufactured of metal, plastic or some material not easily damaged, used to identify a person who borrows a tool from a tool kit or shadow board.

Closed Book Examinations: An examination administered without access to reference material except that provided with or in the examination.

Cognizant NDT Organization: The prime contractor or employer's organization recognized as being responsible for administering qualification and certification of NDT personnel.

Common Accessories: Items that may have multiple uses such as fittings, cables, adapters, etc.

Conductive and Static Dissipating Materials: These are ESD protective materials that prevent the generation of charge, and provide adequate static shielding to ESD items. Packaging materials or containers used for ESD control are typically conductive. Static dissipating materials are used for all other products (i.e., work surfaces, garments, footwear, flooring, etc.).

Consolidated Tool Kit (CTK): A Tool Kit (TK) consisting of a predetermined selection of tools used by a group of employees.

Consumables: Items used in conjunction with tooling and equipment, yet after limited usage do not maintain their original configuration and are used up. Examples are safety wire, solder, tape, sanding disks, string, chalk, etc.

Controlled Area: The work area (determined by the Group ESD Control Program Monitor) that uses ESD protective equipment to meet necessary requirements. The size of the controlled area can vary accordingly; it can be as large as an entire room, or as small as a single ESD workstation.

Custody Account/Custodial Receipt Listing (CA/CRL): A listing of all authorizations, on-hand assets and due-outs for each custodian by organization code and shop code.

Direct Readout Instrument: Direct readout instruments physically display values either as digital readout or an analog display, such as a scale/pointer configuration. Direct readout instruments do not involve adjusting signal displays such as gates, delays, gain, or phase to obtain measurements.

Dispatchable Tool Kit (DTK): TKs designed for check-out, to be taken to a job site, with one individual responsible for the TK.

Documented: The condition of being in written or electronic form.

E & I: Evaluation and Inspection

E-Chit: Electronic signature used to identify a person who borrows a tool from a tool kit or shadow board.

Electrical Overstress (EOS): A transfer of current or an applied voltage level that exceeds a component's rating.

Electrostatic Discharge Sensitive (ESDS): The relative tendency of a device's performance to be affected or damaged by an ESD event.

Employer: A government, prime contractor, sub-contractor, supplier, processor, or outside agency employing individuals performing NDT.

ESD: A transfer of electrostatic charge between bodies at different electrical potential caused by direct contact, or induced by an electrostatic magnetic field.

ESD Control Products/Protective Packaging: ESD items packaged in static-shielding and non-charge-generating materials.

Evaluation: A review, following interpretation of the indications noted during an NDT inspection, to determine whether they meet specified acceptance criteria or to determine its significance.

Examination: Formal, controlled, documented testing conducted IAW a documented written practice to verify the candidate's knowledge of applicable NDT methods.

Expendable Bundles: Two or more like (same stock number) expendable items issued together in an effort to support workloads. (Ex. 10 ea. drill bits, 5 ea. apex bits, 5 ea. razor blades, etc.)

Expendables: Items that become unfit for use and must be periodically replaced. Examples include items such as, blades, apexes, drill bits, and reamers.

Experience: Actual performance or observation conducted in the work environment resulting in the acquisition of knowledge and skill. This does not include classroom or laboratory training but does include on-the-job training.

Faraday Cage: An electrically continuous conductive enclosure that provides electrostatic shielding.

FOD: Any damage caused by foreign objects to aircraft, engines, munitions, missiles, drones, space systems, support equipment, AGE, trainers or components thereof, that can be expressed in physical or economic (monetary) terms which may degrade the product, causing system or component malfunction, deterioration, or loss of life. All work centers performing maintenance on aircraft, missiles, engines, other major end items, or components thereof have a high potential for FOD.

Formal Training: An organized and documented program of activities designed to impart the knowledge and skills necessary to be qualified to this standard. Formal training may be a mix of classroom, practical and programmed self-instruction as approved by the responsible Level 3 or NANDTB.

General Examination: A written examination addressing the basic principles and theory of the applicable NDT method.

GOCO File Clerk: Contracted GOCO TODO employee responsible for filing and posting TOs and TO increments.

GOCO TODO: Government Owned Contractor Operated Technical Order Distribution Office

Hardware: Items that become part of the end product, such as nuts, bolts, washers, fasteners, screws, etc.

Indication: The response or evidence of a condition resulting from an NDT inspection that requires interpretation to determine its significance.

Individual Tool Kit (ITK): A standardized collection of tools organized by task, skill, work area, or a combination thereof issued to an individual.

Inspection: Official review or examination of each tool/item, e.g. the supervisor's 90-day inspections.

Instructor: An individual qualified and designated IAW this standard to provide training for NDT personnel.

Interpretation: The determination of whether indications are relevant or non-relevant.

Inventory: Periodic survey of all tools assigned to an individual, e.g. employee's daily inventories.

Locally Manufactured or Developed/Modified Tool (LM/MT): Any tooling that is altered from its original configuration or any tooling that is developed or manufactured locally.

Maxi Tool Kit (MTK): A mobile CTK used in controlled areas with a check-out/check-in document (AF Form 3126, *General Purpose*, or AF Form 3136, *General Purpose*).

Method: One of the disciplines of nondestructive inspection or testing (e.g. radiography) within which different techniques exist.

MLA: Master Labor Agreement

Modification Kit or Tools: Tools received as part of a Time Compliance Technical Order (TCTO) kit.

National Aerospace NDT Board (NANDTB): An independent national aerospace organization representing a nation's aerospace industry that is chartered by the participating prime contractors and recognized by the nation's regulatory agencies, to provide or support NDT qualification and examination services IAW this standard. Such services may include participation in certification.

On-The-Job Training: Training in the work environment in learning instrument Set-up, equipment operation, recognition of indications, and interpretation under appropriate technical guidance.

Outside Agency: An independent or national body providing training and examination of NDT personnel or any other NDT services to the requirements of this standard. Consultants and self-employed individuals are included in this definition.

Personal Equipment: Non-tool items that are necessary for the completion of assigned tasks such as M-stamps, date stamps, inkpads, pens, pencils, etc.

Personal Items: Technician's personal items such as rings, watches, wallets, necklaces, cell phones etc.

Personal Protective Equipment: Items such as goggles, hearing protectors, safety glasses, inclement weather apparel, etc.

Practical Examination: The examination used to demonstrate an individual's ability to conduct the NDT method that will be performed for the employer. Questions and answers need not be written, but a checklist must be used and observations and results must be documented.

Prime Contractor: An organization having overall responsibility for design, control and delivery of a system, component or product.

Procedure: A general or detailed written instruction for conducting a given process.

Production Support Center (PSC): PSCs controlled by the Special Tool Management Unit (574 AMXS/MXDPA). TCTO TKs and equipment identification numbering will be addressed within this document.

Production Support/Tool Issue Center: Areas authorized for storage and issue of tools, equipment, and TKs.

Qualification: The skill, training, knowledge, experience and, when applicable, the visual acuity required for personnel to properly perform to a particular level.

Quality Assurance Personnel (QAP): Personnel responsible to evaluate and document contractor's performance IAW the Quality Assurance Plan (QASP) and the PWS.

Quality Assurance Specialists (QAS): Personnel designated by the group quality organizations to accomplish assessment/inspections of various products, processes and/or procedures.

Random Inventory Inspection: Separate from other scheduled inspections the inventory documentation (i.e. log book) is filed with the supervisor showing a month by month history identifying inspected TKs. As a minimum the inventory inspection is a quick survey of one kit accounting for tools, common accessories, containers, consumable items, expendable items and equipment assigned to a TK.

Responsible Level 3: A Level 3 designated by the employer with the responsibility and authority to ensure that the requirements of this standard are met and to certify qualified individuals.

SARDIP: Navy Stricken Aircraft Reclamation Disposal Project

Shadow: (For the purpose of this supplement) The process of lining a drawer with a foam material in which relief cuts are made in the shape of the items to be contained within the drawer (hammer, drill, screwdriver, etc.). Shadowing allows for quick assessment of tool inventory and easily identifies those tools that may be unaccounted for.

Shop Equipment: Any item used to adjust or operate equipment and may include accessory items.

Shop Machinery Accessories/Attachments: Items such as dies, fixtures, tool holders, chucks, end mills, shop aids (locally manufactured items used in conjunction with shop equipment to

assist in the production of an end item or product), special machine tooling, end item unique items, equipment that may look like tools, but have been purchased or provided by manufacture.

Silhouette: (For the purpose of this supplement) The process of drawing/outlining the shape of an object.

Specific Examination: The written examination to determine an individual's understanding of operating procedures, codes, standards, product technology, test techniques, equipment and specifications for a given method as used by the employer.

Static Control Workstation: Consists of three components: an adjustable wrist strap cuff and ground cord, a common point ground system, and a static-free work surface.

Sub-Contractor: An organization responsible to the prime contractor for the manufacture or maintenance of aerospace products. For the purposes of this standard, this includes suppliers and processors.

Supplemental List: A list of all items stored in a TK not listed on the TKCRL. (Note: Personal items stored in the personal drawer, ITK, for one day do not need to be added to the supplemental list).

Support Equipment: Items that are used to aide in performing tasks such as droplights, extension cords, multiple air hose couplings, air hoses, etc.

Susceptible Items: Numerous discrete electronic parts, assemblies, and equipment items that are susceptible to ESD damage or degradation when an ESD event occurs or when exposed to electrostatic fields.

Task Oriented Tool Kits (TOTK): A TK designed for a specific task.

Technique: A category within a method; for example, ultrasonic immersion testing or ultrasonic contact testing. Specific techniques within a method are defined by the cognizant NDT organization or NANDTB.

Template: A "master list" of tools specified as necessary for a certain

Test Samples: Parts or images containing known discontinuities or defects used in the practical examination to demonstrate the candidate's proficiency in using a particular method. Test samples can refer to images of actual hardware, such as radiographs.

TO Library: The official storage space location; the TO is alphanumerically maintained when not in use. For example a stationary cabinet, shelf, roll around cart and/or cabinet etc.

Tool: Any instrument/object used by hand to perform work on a weapon system, component, assigned equipment or facilities.

Tool Crib/PSC Tool Center: Tool cribs controlled by the Ogden Air Logistics Center Plant Management (309 MXSS/MXDVAC).

Tool Kit : A container used to store tools or equipment and to maintain positive control and ease of inventory.

Tool Kit and Tool Identification Number: A unique alphanumeric code of sufficient length to accommodate the current and proposed number of kits on an installation.

Tool Kit Custodian Receipt Listing (TKCRL): An inventory of all tools and other items in a tool kit. Includes the quantities, the kit ID number and the tool and item location, i.e. drawer or shelf.

Written Instruction: A procedure detailing the NDT technique and testing parameters used for the inspection of a specific component, group of parts (e.g. “aluminum extrusions” or “aluminum brackets”), or assembly. These are sometimes referred to as “technique sheets” or “data cards.”

Written Practice: A procedure that describes the control and administration of NDT personnel qualification and certification.

Written: Retrievable electronic or hard copy.



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 309TH MAINTENANCE WING (AFMC)
HILL AIR FORCE BASE, UTAH

FEB 05 2009

MEMORANDUM FOR 309 MXW SUPERVISORS

FROM: 309 MXW/DV

SUBJECT: Wing Policy on Operating Cell Phones and Portable Music Devices inside Industrial Areas

1. In an effort to ensure 309 MXW employees comply with Air Force requirements while providing our personnel access to personal communication and music devices, the following policy will be implemented immediately within all 309 MXW Industrial Areas.
2. AFMC Supplement to AFI 21-101, para 1.35.1.1. and its Memorandums of Agreement between HQ AFMC and AFGE 214, allows the use of personal cell phone or communication devices in the industrial/production areas except while performing hands-on maintenance activities. It states, "employees will remove themselves from any maintenance activity, aircraft, or high potential Foreign Object Damage (FOD) traffic areas prior to using a communication device."
3. Due to higher Air Force requirements and the vast types of operations 309 MXW personnel perform, further clarification of the policy is needed.
 - a. As specified in AFI 32-218 para 5.3 under "Other moving violations", you cannot operate any kind of motorized vehicle and talk on a cell phone at the same time unless it is a hands free type device. This policy applies to the entire property of Hill Air Force Base.
 - b. As specified in chapter 14.41 of AFMC Supplement to AFI 21-101 and the MOA dated 1 July 2007, in areas designated as high potential FOD areas, personal cell phones or portable music/video player devices must be controlled along with all other personal items (keys, wallet, purse, etc) either in personal lockers or personal tool drawers. A list which designates specific maintenance and production areas as high potential FOD areas, as well as exceptions, within the 309 MXW has been established (see attachment). Personnel may traverse through the designated high potential FOD areas to gain access to low/non-potential FOD areas or to access a personal drawer or locker. Cell phones and/or portable music/video player devices (not inserted into a docking station), will not be in use in a high potential FOD area or casually carried on the person throughout the duration of the shift while they remain in a high potential FOD area. Individuals in possession of government equipment issued for the performance of official duties will also remove themselves from the immediate vicinity of any maintenance activity, aircraft, or high potential FOD (traffic) areas prior to using a communication device.
 - c. As specified in AFMAN 91-201 para 2.58.5 you cannot talk on a personal communication device within 10 feet of any munitions/explosives operation.

d. As specified in TO 1-1-3 para 2.7.5.2 and TO 00-25-172 para 3.7e, you can not talk on a personal communication devices within 10 feet of internal/open fuel cell maintenance, or within 10 feet of aircraft servicing operations or overboard fuel vents.

e. As specified in AFSSI, 5.4.1. Wireless. No cell phones, Bluetooth devices, cordless phones or microphones, wireless keyboards or mice, wireless LANs, or Infrared LANs are allowed in areas where classified information is discussed, briefed, or processed. *“Area”* refers to a room and/or space the size of a 3-meter radius sphere, centering on the classified source. AFMAN 33-214 Vol 1 para 3.6.12 cellular/PCS and/or other RF or IR wireless devices shall not be allowed into an area where classified information is discussed or processed.

4. This policy letter will be in effect until this policy is incorporated into AFI 21-101, AFMC Supplement, 309 MXW Supplement. My POC for this policy is Grady Forte, 309MXW/QPQ, 777-8687.



ROBERT E. DANDOY
Vice Director

Attachment:
Combined High Potential FOD Areas Listing

309 MXW High-Potential FO Areas

Exceptions within the areas and/or buildings listed include:

a. Low-potential FO areas: 1) administrative cubicle areas for 1a) supervisors, 1b) schedulers, 1c) Aircraft Logistic Specialists, 1d) workloaders, and 1e) other administrative functions, 2) marked aisle ways, 3) walk ways and 4) aircraft tow lanes (when aircraft are not under-tow), 5) 649 Combat Logistics Support Squadron clam shell, 6) the base operations readiness training area located on the east side of the base northeast of the golf course, and 7) the Defense Reutilization Marketing Office lot south of bldg. 257.

b. Non-FO areas: 1) officially designated break areas, 2) cafeterias, 3) restrooms, 4) administrative/ office areas which have permanent walls and passage doors which separate them from industrial/production and major sub-assembly maintenance areas.

c. Docking stations: portable music/video player device; once inserted and while they remain in the docking station are considered to be a sizable device.

Note: If any of the following activities 1) handling of support equipment, 2) moving or packing/un-packing of material/components, 3) or conducting maintenance operations occur in a aisle, walkway or aircraft tow lane, the immediate vicinity within five feet (or IAW specific TO or AFOSH guidance, which ever is more stringent) is deemed a high-potential FO area.

AMARG			
Apron Area Around 7428 Designated by a White Line	Engine shop	Flightline	Flush Farm
In-Tank Fuel Cell Maintenance Area	Maintenance Hangers	Maintenance Shelter 7428	Receiving and Processing Ramp
Test Cell	Wash Rack		
AMXG			
All Areas or Buildings Under the Stewardship of AMXG (see exceptions listed above)			
CMXG			
Building 238 East, Organizations:	MXDPAAA Gas Turbine Engines (GTE) 180/185's	MXDPAAC Pneudraulics	MXDPABA GTE 85-71
MXDPABC Bearing Shop (Only)	MXDPABD GTE 36-50 and 165's	MXDPBAA GTE C-17	MXDPBAD Balance Shop (Only)

309 MXW High-Potential FO Areas

MXDPCAA Electrical Shop	MXDPCAB Air Turbine Starters (ATS)	MXDPCAC F-16 Jet Fuel Starter (JFS), T-38 Gearbox	MXDPCBA Constant Drive Gear Box (CGB), F-16/Accessory Drive Gear Box (ADG)
MXDPCBB Aircraft Mounted Accessory Drive Gear Box (AMADS)	MXDPCBC Hydraulics, F-15 JFS		
Building 240, Organization:	MXDPCCC Test Cell		
Building 252, Organization:	MXDPAAD Fuels		
Building 503, Organizations:	MXDPBB Hydraulics	MXDPBC Hydraulics	MXDPCAA Hydraulics
MXDPCAB Hydraulics	MXDPCAD Hydraulics	MXDPCBA Hydraulics	MXDPCBC Hydraulics
MXDPCBD Hydraulics			
Building 503A, Organizations:	MXDPBA Pneudraulics	MXDPBB Pneudraulics	MXDPBC Pneudraulics
MXDPBD Pneudraulics	MXDPBE Pneudraulics	MXDPBF Pneudraulics	MXDPBG Pneudraulics
Building 509, Organizations:	MXDPAA Armament	MXDPAB Armament	MXDPAC Armament
MXDPAD Armament	MXDPAE Armament	MXDPAP Armament	
Building 2013, Organization:	MXDPBB Hydrazine		
Building 507, Organizations:	MXDPBBA Assembly	Strut MXDPCAA Heavy Lifter Assembly	
EMXG			
Support Center Pacific, Kadena AB Japan	MXDPAA Fuel Tank Maintenance Area		
MMXG			
The Following Buildings:	1266	1424	

309 MXW High-Potential FO Areas

The Following Building in Freeport Center:	A15		
The Following Buildings in MAMS I and MAMS II:	940	945	950
965	970	975	980
2014	2016	2114	2211
2212	2213	2401	2403
2407	2408	2409	
MXSG			
No Buildings or Areas Have Been Designated			
SMXG			
No Buildings or Areas Have Been Designated			

Attachment 8.27.A1 (Added)

Example 1, 309 CMXG QAP (Sample document through paragraph 3.21)

QUALITY ASSURANCE INSPECTION AND EVALUATION PLAN

309 CMXG

SEPTEMBER 2007

309TH COMMODITIES MAINTENANCE GROUP (CMXG)

INSPECTION AND EVALUATION PLAN

SEPTEMBER 2007

Section 1: General (Introduction)

1.1. Objective. The 309CMXG's depot maintenance objective is to provide depot level products and services for aerospace equipment which fully comply with technical data requirements and specifications, that are produced on time and within cost while preserving operational safety, suitability, and effectiveness. This will be accomplished through the use of disciplined engineering practices, strict adherence to technical data, a well-trained and motivated workforce, correct tools and equipment, a quality work environment and meticulous process discipline. To facilitate these essential operating principles and to help achieve the highest levels of customer expectations and continual improvement, a rigorous quality assurance program will be deployed.

1.2. Purpose. This document will serve as the baseline inspection and evaluation plan used by 309 CMXG Quality Assurance to evaluate and assess the functions and associated maintenance actions and processes performed throughout all 309 CMXG production and support organizations. The plan has been developed as an integral element supporting 309 CMXG's Maintenance Standardization and Evaluation Program (MSEP). The inspections and evaluations outlined in this document will be further supplemented and defined through the Quality Assurance Surveillance Plan (QASP).

1.3. Applicability. This plan will only address inspections and evaluations conducted by 309 CMXG QA and does not pertain to inspection programs and processes performed by organizations outside the group such as the MXW compliance and evaluations office. Staff assistance visits, Oversight inspections, Activity inspections and other MXW managed inspection processes and programs are outlined in the wing quality manual.

1.4. Distribution. The Office of Primary Responsibility (OPR) for the inspection and evaluation plan is 309 CMXG/QP. The document will be signed by the 309 CMXG QA Chief, and the 309 CMXG/CC. Once the document has been signed by both parties, 309 CMXG QP will distribute the plan throughout 309 CMXG organizations to initialize implementation. 309 CMX/QP will maintain the official record copy of the plan.

1.5. Document Control. This plan is effective as of the date signed. As a minimum, the plan will be reviewed annually or whenever a significant change is required. Signature and date by the Chief, 309 CMXG Quality Assurance or designated representative on the document review page will constitute formal document review.

Section 2: Planning Elements (Scope & Responsibilities)

2.1. Inspection and Evaluation Types. For the purpose of effective planning, all categories of inspections and evaluations as specified in AFI21-101 will be conducted, and unless specified otherwise, will be conducted throughout all 309 CMXG production and support organizations. The following types of inspections and evaluations will be conducted in support of this plan:

2.1.1. Personnel Evaluations (PE): An observed evaluation of a maintenance action by an individual or team. As a minimum, each PACSS certified technician assigned to 309 CMXG will be required to pass a PE every 24 months.

2.1.2. Quality Verification Inspections (QVI): An assessment or evaluation of a maintenance procedure, process, product, or portion thereof, while it is being accomplished, or after it has been completed and the task work control document has been stamped. While performing a QVI, a PE of a single technician or team of technicians may be evaluated/assessed at the same time. Credit may be taken for both a QVI and PE as applicable.

2.1.3. Routine Inspection List (RIL): Inspections or assessments of common depot production maintenance programs and processes that require regular and continuous evaluation. These categories of assessments may be evaluated independently or may be performed in conjunction with other types of assessments such as PEs and QVIs.

2.1.4. Management Inspections (MI): These inspections will be performed to follow-up trends, conduct investigations or conduct research to help determine the root cause of problems. CMXG/CC, SQ/CC or work center supervisors may request MIs, and the inspections can be rated or non-rated.

2.1.5. Special Inspections (SI): SIs are inspections not covered by QVIs, PEs or MIs. SIs may include, but are not limited to, equipment forms inspection, document file inspections, tool kit inspections, TO files, vehicle inspections, housekeeping, safety practice, FOD program etc. SIs can also be rated or non-rated.

2.1.6. Isolated Violations (IV): This category represents observed events or conditions with safety implications or technical violations not directly related to an inspection or evaluation and are considered unsafe, not IAW established procedures, or in the case of equipment unfits to operate. 309 CMXG QA will document this category under any of the following conditions:

2.1.6.1. DSV: An unsafe act by an individual.

2.1.6.2. TDV: An observation of any person performing maintenance without the proper technical data available and in use when specifically required by the work control document.

2.1.6.3. UCR: An unsafe or unsatisfactory condition, other than a DSV chargeable to the work center supervisor. UCR discrepancies will be charged and documented when it cannot be positively determined who created the condition.

Section 3: Plan Execution Elements (Inspection Types etc.)

3.1. QAS Training. Training requirements for QAS' assigned to 309 CMXG will be IAW AFI21-101 and the 309 CMXG QP training plan. The training plan will be established, documented and managed IAW policies, instructions and certification procedures. 309 CMXG QA personnel shall be trained and qualified prior to conducting unaccompanied inspections or evaluations and will be considered qualified after completing 309 CMXG core training requirements, recurring training and training as prescribed by AFI 21-101.

3.2. Evaluator Proficiency Evaluation (EPE) Procedures. Each QAS shall be trained and must pass an initial EPE prior to performing unsupervised evaluations or inspections. Additionally, all fully trained/qualified QAS' will have an EPE conducted on a biennial recurring basis. EPEs will be conducted by a qualified EPE evaluator, and will consist of one evaluation, and one inspection (initial and recurring) on each inspector. EPEs will be documented on AFMC FORM 343, reported in QIMSS and tracked in the PAC/TSS.

3.3. EPE Evaluators. Evaluators will be specifically designated in writing by the 309 CMXG QA Chief, and unless otherwise specified, will be the only individuals conducting EPEs.

3.4. Assessment Ratings. 309 CMXG QA will use the following criteria for establishing Quality Assessment Ratings (QAR). The QAR is a value reflecting the results of quality assessments. These ratings will be input into the Quality Information Management Standard System (QIMSS) as either *pass*, reflected as a QAR 1, or a *fail*, reflected as a QAR 3. Deficiencies will be classified as major or minor findings. A **minor finding** is defined as a condition that does not endanger personnel, affect safety of flight, jeopardize equipment reliability, or warrant discontinuing a process or equipment operation. A **major finding** is defined as a condition that would endanger personnel, jeopardize equipment reliability, or warrant discontinuing process or equipment operation. 309 CMXG will use these ratings and, classifications in conjunction with applicable regulatory guidance exclusively for determining assessment results.

3.5. QAR 3 Specific Procedures. When a QAR 3 condition is observed, 309 CMXG QA will notify appropriate production supervision immediately. Safety or equipment reliability deficiencies will not be left uncorrected. If an assessment is being performed, QA will consider the seriousness of the deficiency or error when deciding whether to continue the assessment or not. When a QAR 3 is directly attributable to a certified technician's proficiency, QA will make recommendation that the individual, team, or team member be decertified. This recommendation will be provided directly to the technician's supervisor who should take appropriate decertification action.

3.5.1. Specific conditions warranting a QAR 3. 309 CMXG QA will assign a QAR 3 when:

3.5.1.1. A TO "warning" is overlooked or a safety error that could result in personnel injury is detected.

3.5.1.2. A TO "caution" is overlooked or an equipment reliability error that could result in personnel injury is detected.

3.5.1.3. The team or individual accomplishing the task being evaluated demonstrates a lack of technical proficiency.

NOTE: QA may assign a QAR 3 to a process or program where systemic deficiencies are evident.

3.6. QASP Development and Distribution. The 309 CMXG QASP will be distributed each quarter. The quarterly QASP reflects projected or planned minimum numbers of assessments to be conducted throughout the group during each assessment period. The plan will be further supported and implemented through a monthly QASP review and refinement process between QA, each production squadron, and the group director.

3.7. RIL Development and Distribution. 309 CMXG QP will develop RILs and consolidate squadron inputs/suggested changes and obtain 309 CMXG/CC approval as required. This product will be deemed the master RIL. As a minimum, the consolidated list will be reviewed quarterly and distributed as part of the QASP. Tasks will not be removed from the RIL without 309 CMXG/CC approval.

3.8. Rational for determining assessment numbers and evaluations. This inspection and evaluation plan establishes a baseline, minimum number of assessments projected to be performed over the course of the assessment period. The plan will be further refined and specifically tailored for all major 309 CMXG workloads and distributed in the form of a group QASP each quarter. The QASP will be reviewed monthly and refined within each squadron and adjusted as needed based on documented trends or determination of noted problem areas where improvement is needed.

3.8.1. This data is analyzed through the following process:

3.8.1.1. A thorough review and analysis of the monthly quality data identifies areas that require additional attention, evidenced by the performance indicators and overall pass rates for each particular program.

3.8.1.2. Trending of incoming QDRs gives a basis for increased QVIs in areas that may need additional focus.

3.8.1.3. Use of the QIMSS data system to track progress in RCCs throughout the month.

3.8.2. QVI Assessment Numbers. The minimum number of QVIs to be performed is based on the average yearly production numbers factored monthly at 3%. Example: Average monthly production = 5660 items $\times .03 = 170$ QVIs monthly (510 quarterly).

3.8.3. RIL Assessment Numbers. The amount of RIL assessments to be performed is based on the following principle. As a minimum, QA will assess all applicable programs as reflected on the group's master RIL throughout all 309 CMXG squadrons. RILs will be rotated monthly among all flights so that all programs are being assessed equally and on a regular basis. As a minimum, every area listed on the RIL will be assessed at least quarterly for every 309 CMXG production work center. Additional RIL programs/processes exclusive to a particular squadron or work center will only be assessed in that work center.

3.8.4. Personnel Evaluation Numbers. The number of PEs to be performed during the assessment period will be based the number of PAC/TSS certified technicians requiring a PE during the period. Specific numbers will be forecasted in the QASP.

3.9. Safety and Environmental Program Compliance Assessment. These programs will be assessed jointly by 309 CMXG QP and ENV. Pure Environmental compliance assessments will be conducted by the environmental program management specialists. When, during the course of conducting other assessments such as QVIs or RILs, QA identifies environmental program compliance related issues, ENV will be notified to ensure the findings are properly recorded. Specific inspection/evaluation areas, numbers of assessments and inspection intervals will be IAW the hazardous waste management plan and will be projected in the QASP. The system used to record environmental program assessments is the environmental standards, assessments, and tracking system (SATS). QIMSS will not be used to record and track this category of inspection.

3.10. Acceptable Quality Levels (AQLs). AQLs/standards denote the maximum allowable number of minor findings or defects for any assessment. AQLs will be stringent enough that the task, process, or product can meet an acceptable quality level, but not so strict that a quality assessment rating - 1 (QAR-1) is unattainable.

3.12. Rational for AQL Establishment. AQLs for all production areas within 309 CMXG will be based on workload complexity and task criticality (processes, procedures and product). The more complex the workload, the less strict the AQL will be set in order to attain a QAR-1 (more minor defects allowed). The less complex workloads will have stricter AQLs (less minor defects allowed). AQLs will be reviewed at least quarterly and may be adjusted periodically as needed based on QA performance based data and indicators. Consistently high QAR-1 ratings in any particular area (task, product or process) may be an indication that the AQL is set too low. Likewise, consistent QAR-3 or failed inspections, in a particular area may indicate the AQL needs to be adjusted.

3.12.1. Complex Workload AQL

3.12.1.1. QVIs: 0-3 Minors = QAR 1; 4 or more Minors or 1 Major = QAR 3

3.12.1.2. PEs: 0-2 Minors = QAR 1; 3 or more Minors or 1 Major = QAR 3

3.12.2. Less Complex Workload AQL

3.12.2.1. QVIs: 0-2 Minors = QAR 1; 3 or more Minors or 1 Major = QAR 3

3.12.2.2. PEs: 0-1 Minor = QAR 1; 2 or more Minors or 1 Major = QAR 3

3.12.3. Routine Inspection List AQL (All Workloads)

3.12.3.1. RILs: 0-3 Minors = QAR 1; 4 or more Minors or 1 Major = QAR 3

3.13. Inspection and Evaluation Areas. For the purpose of planning and executing the group inspection and evaluation plan, major workloads are broken down into assessment areas and documented in the QASP. Assessment areas are defined as segments or portions of workload, system, component, process, procedure or subject matter that is to be inspected, investigated, evaluated or audited. Assessment areas also refer to specific operations, processes and procedures performed within a major workload area.

3.14. Major CMXG Workloads. Major workloads supported by this inspection plan are as follows:

3.14.1. Power Systems Maintenance. Performs overhaul and repair on components used in numerous aircraft systems supporting war-fighters Department of Defense-wide. Items include gas turbine engines and secondary power components such as airframe mounted accessory drive, jet fuel starters and auxiliary power units. The squadron also provides base-wide support for all types of batteries, bearing, hoses, tubing and cables, and performs air conditioner repair and overhaul for specialized applications.

3.14.1.1. Assessment Areas and AQL Application for Power Systems:

3.14.1.1.1. Complex Workload AQL

3.14.1.1.1.1. Engines; Test Cell

3.14.1.1.2. Less Complex Workload AQL

3.14.1.1.2.1. Machining; Grind/Plate

3.14.1.1.2.2. Paint/Clean, Balance

3.14.1.1.2.3. Electrical, Hydraulics

3.14.2. Commodities Maintenance. Performs depot-level repair/overhaul and testing for nearly 1,000 hydraulic, Pneudraulics, armament, fuel tank and winch assets as well as physiological trainers which support 15 aircraft types. The branch manages the USAF's Technical Repair Center (TRC) for aircraft hydraulic/Pneudraulics systems and produces over 33,000 end items annually. The branch also develops and executes all support functions required to repair/overhaul assets. These functions include production and operational planning, training, manpower projections, production acceptance certification requirements, quality and continuous process improvements, and shop floor scheduling and material planning.

3.14.2.1. Assessment areas and AQL Application for Commodities:

3.14.2.1.1. Complex Workload AQL

3.14.2.1.1.1. Hydraulics; Guns; Winches; Screw jacks,

3.14.2.1.2. LESS Complex Workload AQL

3.14.2.1.2.1. Pneudraulics

3.14.2.1.2.2. Electrical/Mechanical

3.14.3. Landing Gear Maintenance. Provides maintenance, repair, manufacturing and modification of landing gear, wheels and brakes, using established methods and processes. Determines and implements pre-production and operational planning to include training, manpower projections, facility fixturing, equipment, production acceptance certification requirements, quality and continuous process improvements. Provides shop floor scheduling and material planning.

3.14.3.1. Assessment areas and AQL Application for Landing Gear:

3.14.3.1.1. Complex Workload AQL.

3.14.3.1.1.1. Strut Assembly/Disassembly.

3.14.3.1.2. LESS Complex Workload AQL.

3.14.3.1.2.1. Wheels & Brakes.

3.14.3.1.2.2. Machining & Grinding and Plating.

3.14.3.1.2.3. Flame Spray and Anodize.

3.14.3.1.2.4. Mechanical, Shot peen, Blast and E & I.

3.14.4. New Manufacturing. Provides in a general support and development capacity, Material Repair and Overhaul (MRO) applications for: landing gear, wheels and brakes, components, guns, hydraulics, and Pneudraulics. Provides reverses engineering, manufacture and assembly of unavailable or long lead time components. Machining cells include: Rapid response for quick repair and rapid prototyping of simple parts, computer numerical control (CNC) Team for high end machining and turning functions and a tool and dye team for high precision manufacturing such as work holding fixtures and inspection jigs.

3.14.4.1. Assessment areas and AQL application for new manufacture

3.14.4.1.1. All Workloads for New Manufacture, Less Complex AQL.

3.14.4.1.1.1. Machining/JIT.

3.14.4.1.1.2. Tool & Dye

3.14.4.1.1.3. Machining

3.14.4.1.1.4. Welding & Heat Treat.

3.15. MSEP Summary Development and Distribution. Each month 309 CMXG QP will compile QA inspection data and present to the 309 CMXG/CL in the form of the MSEP summary. The purpose of the summary is to advise the 309 CMXG leadership and other appropriate activities within the group, on the quality of maintenance and overall health of applicable maintenance management programs. The MSEP summary will consist of visual briefing information containing various charts and graphs, excel spreadsheets reflecting significant findings and a narrative summary. The narrative summary contains an analysis of inspection results, a summary of significant discrepancies, technical inspections and recommendations for improvements. The summary and all supporting information will be distributed to group leadership approximately 1 week prior to each month's program management review.

3.16. MSEP Grading. 309 CMXG QA will determine an MSEP grade for each production squadron and an overall grade for the group. Grades will be depicted using a five tier rating system of "Outstanding, Excellent, Satisfactory, Marginal and Unsatisfactory". Ratings will be derived by dividing the total "passed" inspections by the total number of inspections performed. In addition, 0.5% percentage points will be deducted for each TDV and DSV from the overall group rating.

3.17. AFMC Form 343, Control and Processing.

3.17.1. Inspection Documentation Procedures. Normally, all 309 CMXG QA inspections, evaluations and assessments will be documented on the AFMC Form 343 and input into QIMSS. QAS' will make every attempt to document inspections during the same duty shift on which the inspection was performed. All inspections will be documented within one work day or 24 hrs of performing the inspection. All reports will be given an initial suspense date of 10 days beginning the next work day after the defect is input into QIMSS and ending upon acceptance of corrective/preventive action by QA.

3.18. Corrective and Preventive Action Process:

3.19. 343 Extension Procedures. Extensions may be granted for certain situations when the initial 10-day suspense for closing a 343 cannot be met. When circumstances warrant more time to address and put in place adequate corrective and preventive actions, the responsible person listed on the 343 should request an extension. Extensions will normally be granted when adequately justified and will be in 10 day increments from the initial closing suspense. Longer extensions may be necessary depending on the deficiency. These situations will be addressed by exception.

3.20. Request For Quality Assistance (RQA) Procedures. Timely and effective responses to deficiencies and needed improvements are critical. A system of identifying deficiencies in

maintenance processes and developing sound resolutions is essential. 309 CMXG will utilize the AFMC Form 77 Request for Quality Assistance (RQA) Quality Assistance can be requested by anyone by submitting an AFMC 77, Request for Quality Assistance (RQA) requests will be coordinated through the appropriate management official and quality representatives. The RQA process is tool is used to evaluate areas of concern such as: process deficiencies, product quality concerns that impact product quality, faulty material, product rework, etc. RQA's are performed to gather information that will lead to problem solving and process improvement. The responsibility for conducting RQA's is assigned to 309 CMXG/QP. RQA findings and improvements/benefits will be furnished and briefed to all levels of management and the affected production personnel. 309 CMXG/QP will document RQA actions in QIMSS. The following database, checklist and attachment forms will be used to capture and document all product/process changes requested and documented in QIMSS: Process Improvement Status Form #1, Process Improvement checklist #1 with supporting information and process improvement trigger list. The link to find the mentioned data base and folder is located at; N:\MAP\MAPN\RQA's. A complete process flow chart for the 309 CMXG RQA process is available at the previous mentioned location. The RQA program requirement is detailed in AFI 21-101.

3.21. Quality Feedback Review Procedures. (Insert paragraph here)

Signature Block for group CC

Attachment A10.19.1. (Added) AFMC Form 309 Instructions

A10.19.1.1. (Added) Page AGE One: Use this page to document inventory records for CTK and TKs used in shop areas only.

A10.19.1.1.1. (Added) Name: Employee's Name.

A10.19.1.1.2. (Added) Organization: Org/Shop Code.

A10.19.1.1.3. (Added) Year: Current Calendar Year.

A10.19.1.1.4. (Added) Kit Number: Number assigned by tool issue center.

A10.19.1.1.5. (Added) Month/Day: Initial in appropriate block of day and month inventory was performed.

A10.19.1.2. (Added) Page two/three: Documentation of job inventory record.

A10.19.1.2.1. (Added) Name: Employee's Name.

A10.19.1.2.2. (Added) Kit Number: Number assigned by tool issue center.

A10.19.1.2.3. (Added) Date: Date Inventory Completed.

A10.19.1.2.4. (Added) Time: Time Inventory Completed.

A10.19.1.2.5. (Added) Inspection:

A10.19.1.2.6. (Added) End of Job: Check this block when inspection is completed at end of job.

A10.19.1.2.7. (Added) End of Shift: Check this block when inspection is completed at end of shift.

A10.19.1.2.8. (Added) Aircraft/Engine Serial Number: Serial number of aircraft or serial number of engine that corresponds to equipment being worked.

A10.19.1.2.9. (Added) End Item Document Number: Links the inspection to the specific job.

A10.19.1.2.10. (Added) Initial (if O.K.): Employee initials performing inspection.

A10.19.1.3. (Added) Page Four

A10.19.1.3.1. (Added) Supervisor's 90-Day Inspection

A10.19.1.3.2. (Added) Date: Date that supervisor is performing inspection.

A10.19.1.3.3. (Added) Supervisor's Signature: Signature of supervisor performing inspection.

A10.19.1.3.4. (Added) Remarks: Supervisor's comments.

A10.19.1.3.5. (Added) Lost Tool Documentation:

A10.19.1.3.6. (Added) Date: Date tool was lost.

A10.19.1.3.7. (Added) Report Number: Control Number assigned to lost tool report (AFMC Form 310).

A10.19.1.3.8. (Added) Item Missing: Nomenclature of missing tool.

Attachment A10.19.2. (Added) AFMC Form 310 Instruction

(Added) This form is used to report lost and/or found items (tools, equipment, etc.). Most of the blocks are self explanatory. Use the information below when filling out the form. Blank forms can be found at <https://www.afmc-mil.wpafb.af.mil/pdl/afmcforms/>.

NOTE: (Added) Report all items lost on aircraft and/or equipment to Quality Assurance as soon as possible. Impoundment action may be required.

Block 1: **(Added)** The control number will be assigned by Quality Assurance when report is received.

Block 2: **(Added)** Enter the name of the individual who lost or found the item. (Last, First, MI)

Block 3: **(Added)** Enter Org/Shop (example – 309 AMARG/MXDPA)

Block 4: **(Added)** Enter date and time lost/found.

Block 5: **(Added)** Enter a description of the lost/found item (Stock/Part number if available)

Block 6: **(Added)** Enter Identification number - if available. (example: AM#, AMTR#, etc.)

Block 7A: **(Added)** Enter area where item was lost/found. (example: area 24, bldg #, unknown etc.)

Block 7B: **(Added)** Enter the end item serial number. (i.e. aircraft, wing etc.)

Block 8A: **(Added)** This block is the most important on the form. Enter the following:

Block 8B: **(Added)** Identify what task was being performed when item was lost. Include PWO and OPN.

Block 8C: **(Added)** Identify where the task was being performed. (TMS,MDS/SN)

Block 8D: **(Added)** Identify where the item was last used if possible.

Block 8E: **(Added)** Explain how the item was lost (in detail) to the best of your ability.

Block 8F: **(Added)** If an item was found, explain where and how.

Block 8G: **(Added)** If more space is needed, use reverse side of form.

Block 9: **(Added)** Individual who lost/found the item signs this block.

Block 10: **(Added)** Print supervisor's name, date and time notified.

Block 11A: **(Added)** The supervisor will sign this block authorizing replacement of item (if required)

Block 11B: **(Added)** Enter date.

Block 11C: **(Added)** Enter supervisor's phone number.

Block 11D: **(Added)** Enter supervisor's office symbol.

Block 11E: **(Added)** Individual who issues the tool will print their name in this block.

Block 11F: **(Added)** Enter date of tool issue.

Block 12: **(Added)** Describe the all efforts taken to locate the lost item or where the found item originated. Try to use a logic tree to determine what you were doing prior to losing the item or

where it was last seen or used. Be specific with your description. Document all actions taken up to the time the MA or designated representative authorized the search to end.

Block 13: **(Added)** Enter the date and time the search started.

Block 14: **(Added)** Enter the date and time the search was terminated. (See block 18)

Block 15: **(Added)** Print the names of the individuals involved in the search.

Block 16: **(Added)** Check the appropriate block

Block 16A: **(Added)** Self explanatory

Block 16B: **(Added)** When checking this block, remember if the individual was not following proper tool control procedures, they are negligent.

Block 17A: **(Added)** This block will be signed and dated/time completed by the section supervisor. They will ensure the form is properly documented and action is adequate.

Block 17B: **(Added)** This block will be signed and dated/time completed by the branch supervisor. They will determine if action is adequate.

Block 17C: **(Added)** This block will be signed and dated/time completed by the division supervisor. They will determine if action is adequate.

Block 18: **(Added)** This block is signed by the MA or designated representative and date/time entered. They will determine if more in depth action is needed. i.e. X-ray, bore scope etc.

Attachment A13 (AFMC-Continued) (Added)

A13.7.6. (Added) 309 AMARG Hydrazine canisters for F-16 aircraft emergency power unit (EPU) system:

A13.7.6.1. (Added) Regulatory Documents. F-16 TOs and Air Force Occupational Safety and Health (AFOSH) Standard (STD) 48-8, 309 AMARG *Hydrazine Maintenance, Handling and Spill Response*.

A13.7.6.2. (Added) Application: All 309 AMARG personnel who remove, install and handle hydrazine canisters.

A13.7.6.3. (Added) Initial 309 AMARG training requirements. Performed by the 162d Fighter Wing, Tucson Air National Guard through XPT IAW the interservice support agreement (ISA) with them.

A13.7.6.4. (Added) 309 AMARG Refresher training requirements. Annually same as initial.

A13.7.7. (Added) 309 AMARG Atmospheric Monitoring:

A13.7.7.1. (Added) 309 AMARG Regulatory Documents: AFOSH STD 91-25, AFOSH STD 48-8 and all locally established master entry permits (MEP).

A13.7.7.2. (Added) Application: All 309 AMARG personnel who are required to perform atmospheric testing/monitoring.

A13.7.7.3. (Added) 309 AMARG Initial Training: Locally developed SOJT addressing the operation and use of the monitoring equipment required IAW the applicable MEP.

A13.7.7.4. (Added) 309 AMARG Refresher Training: Same as initial training; conducted every 24 months.

A13.7.8. (Added) 309 AMARG Radiation Monitoring (RAD-1):

A13.7.8.1. (Added) Regulatory Documents: AFI 40-201, *Managing Radioactive Materials in the US Air Force*.

A13.7.8.2. (Added) Application: All 309 AMARG personnel responsible for performing radioactive surveys, sampling and swipe tests.

A13.7.8.3. (Added) 309 AMARG Initial Training: 20-hour formal classroom training course.

A13.7.8.4. (Added) 309 AMARG Refresher Training: A 1-hour refresher formal classroom-training course each year.

A13.7.9. (Added) 309 AMARG Hydrazine Exposure Familiarization:

A13.7.9.1. (Added) Regulatory Documents: AFI 90-821, *Hazard Communication*, and 309 AMARG Base Supplement 1, and applicable aircraft and missile maintenance manuals and F-16 aircraft TOs.

A13.7.9.2. (Added) Application: All 309 AMARG personnel working on F-16 Aircraft while Hydrazine Canister is installed.

A13.7.9.3. (Added) Initial training: 309 AMARG training will include a description of each operation that risks exposure to hydrazine, the quantity of hydrazine involved, work methods and

protective equipment required for each task, actions to be taken in the event of an accidental spill or overexposure and a description of the medical surveillance program.

A13.7.9.4. (Added) Refresher Training: Annually, same as initial.

NOTE: (Added) Upon initial assignment to 309 AMARG, newcomer's indoctrination will include identification of various chemical hazards including hydrazine as found on F-16 aircraft and Titan II missiles. The employee's HAZCOM II training conducted by the supervisor and documented on employee's AF Form 55, *Employee Safety and Health Record* can satisfy the briefing requirement.

ATTACHMENT AMXG 14.68.A1: (Added) C-130 ENGINE RUN QUALIFICATION

A1. (Added) The following syllabus will be used as a guide in conducting on-the-job training (OJT) for engine run qualification of installed aircraft engines.

Section A: (Added) The following technical manuals will be used in conjunction with OJT:

A1.1. (Added) 1C-130()-1, *Flight Manual*

A1.2. (Added) 1C-130()-2-1, *General Maintenance Instructions*

A1.3. (Added) 1C-130()-2-4, *Power Plant Maintenance Instructions*

A1.4. (Added) 1C-130()-2-5, *Fuel System Maintenance Instructions*

A1.5. (Added) 1C-130()-2-4CL-1, *Engine and Propeller Maintenance and Checklist*

A1.6. (Added) 1C-130B-2-8, *Radio and Navigation Maintenance Instructions*

A1.7. (Added) 1C-130H-2-61JG-10-1, *Propeller Organizational Maintenance Assembly*

A1.8. (Added) 1C-130H-2-71JG-00-1, *Power Plant Organizational Maintenance and Checklist*

A1.9. (Added) 1C-130H (H)-2-2, *Power Plant Series Maintenance Instructions*

A1.10. (Added) 1C-130H-2-49JG-00-1-1, *Organizational Maintenance Auxiliary Power Unit System*

A1.11. (Added) 1C-130H-2-49JG-00-1-2, *Organizational Maintenance Auxiliary Power Unit*

A1.12. (Added) OO-20-1, *Preventative Maintenance Program, General Policy Requirements and Procedures*

A1.13. (Added) AFI 11-218/AFMC Supplement 1, *Aircraft Operations and Movement on the Ground*

A1.14. (Added) AFI 21-101, *Maintenance Management of Aircraft*, AFI 21-218

A1.15. (Added) AFMCI 21-108, *Maintenance Training and Production Acceptance Certification (PAC) Program*

A1.16. (Added) AFI21-101_AFMCSUP1_309MXWSUP1, *Engine Run Policies for C-130, F-16 and A-10 Aircraft*

Section B - (Added) Cockpit Familiarization:

A1.17. (Added) 1C-130B-1, *Flight Manual*

Section C - (Added) Ground Safety and Emergency Procedures:

A1.18. (Added) 1C-130B-1, *Flight Manual*

A1.19. (Added) 1C-130B-2-2, *Maintenance Instructions Ground Handling, Servicing, and Airframe Maintenance*

A1.20. (Added) AFI 11-218, *Aircraft Operations and Movement on the Ground*

A1.21. (Added) 1C-130B-2-8, *Radio and Navigation Maintenance Instructions*

Section D - (Added) Aircraft and Engine Servicing:

A1.22. (Added) 1C-130B-2-2, *Maintenance Instructions Ground Handling, Servicing, and Airframe Maintenance*

A1.23. (Added) 1C-130H-2-61JG-10-1, *Propeller Organizational Maintenance Assembly*

Section E - (Added) Engine Start and Operating Procedures:

A1.24. (Added) 1C-130B-1, *Flight Manual*

A1.25. (Added) 1C-130B-2-4, *Power Plant Maintenance Instructions*

A1.26. (Added) 1C-130H (H)-2-2, *Power Plant Series Maintenance Instructions*

A1.27. (Added) 1C-130H-2-4, *Power Plant Maintenance Instructions*

A1.28. (Added) 1C-130H-2-61JG-10-1, *Propeller Organizational Maintenance Assembly*

A1.29. (Added) 1C-130H-2-71JG-00-1, *Power Plant Organizational Maintenance and Checklist*

A1.30. (Added) 1C-130H-2-49JG, *Organizational Maintenance Auxiliary Power Unit*

A1.31. (Added) 01-GA ()-2-4, *NAV AIR, NATOPS, Power Plant Maintenance Instructions*

Section F – (Added) Two-Part Written Exam:

A1.32. (Added) Part 1 - Consisting of 15 questions pertaining to emergency procedures. Part 1 must be completed with a score of 100 percent before Part 2 is taken. If Part 1 is failed, there will be a 1 week minimum before another test is taken.

A1.33. (Added) Part 2 - Consisting of 25 questions to actual engine operation.

Section G - (Added) Demonstration of ability to perform an actual engine run.

ATTACHMENT 14.68.A2: (Added) 309 AMXG F-16 ENGINE RUN QUALIFICATION:

A2. (Added) The following syllabus will be used as a guide in conducting on-the-job training (OJT) for engine run qualification of installed aircraft engines.

Section A - (Added) The following technical manuals and instructions will be used in conjunction with OJT:

A2.1. (Added) 1F-16()-1, *Flight Manual*

A2.2. (Added) 1F-16-GV, *General Vehicle Description*

A2.3. (Added) 1F-16-2-12JG, *Servicing*

A2.4. (Added) 1F-16-2-23JG, *Ultra High Frequency (UHF) and Very High Frequency (VHF) Communications*

A2.5. (Added) 1F-16-2-49JG, *Emergency Power System*

A2.6. (Added) 1F-16-2-49GS, *Emergency Power System, General System*

A2.7. (Added) 1F-16-2-70JG, *Engine Run, Removal, and Installation*

A2.8. (Added) T.O. 00-20-1, *Preventative Maintenance Program System*

A2.9. (Added) AFI 11-218, *Aircraft Operation and Movement on the Ground*

A2.10. (Added) AFI 21-101, *Maintenance Management of Aircraft,*

A2.11. (Added) *Engine Run Policies for C-130, F-16, and A-10 Aircraft*

Section B - (Added) Cockpit familiarization:

A2.12. (Added) 1F-16()-1, *Flight Manual*

Section C - (Added) Ground safety and emergency procedures including operation of normal and emergency brake systems and nose wheel steering:

A2.13. (Added) 1F-16()-1, *Flight Manual*

A2.14. (Added) 1F 16()-2-95 GS-00-1, *Crew Escape and Safety*

A2.15. (Added) 1F-16()-2-10JG-00-1, *Aircraft Safety*

A2.16. (Added) 1F-16()-2-49GS, *Emergency Power Systems*

Section D - (Added) Radio and intercom systems procedures:

A2.17. (Added) 1F-16()-1, *Flight Manual*

A2.18. (Added) 1F-16()-2-23JG, *Ultra High Frequency (UHF) and Very High Frequency (VHF) Communications*

A2.19. (Added) AFI 11-218, *Aircraft Operation and Movement on the Ground*

Section E - (Added) Aircraft and engine servicing and inspection requirements:

A2.20. (Added) 1F-16()-1, *Flight Manual*

A2.21. (Added) 1F-16-2-12JG, *Servicing*

A2.22. (Added) 1F-16-2-70JG, *Engine Run, Removal, and Installation*

Section F -(Added) Engine start and operating procedures:

A2.23. (Added) 1F-16()-1, *Flight Manual*

Section G – (Added) Hush House and sound suppressor operation manuals:

A2.24. (Added) D4-6-613-1, *Operating and Maintenance Instructions, Engine Ground Run-up Noise Suppression System*

A2.25. (Added) D4-6-645-1, *Enclosed Noise Suppressor System (Hush House)*

ATTACHMENT 14.68.A3: (Added) 309 AMXG A-10 Engine Run Qualification

A3. (Added) The following syllabus will be used as a guide in conducting on-the-job training (OJT) for engine run qualification of installed aircraft engines.

Section A (Added) The following technical manuals and instructions will be used in conjunction with OJT:

A3.1. (Added) 1A/10A-1, *Flight Manual*

A3.2. (Added) 1A-10A-2-1-1, *General Vehicle Description*

A3.3. (Added) 1A-10A-2-4JG-1, *Aircraft Safety*

A3.4. (Added) 1A-10A-2-12JG-1, *Servicing*

A3.5. (Added) 1A-10A-12JG-1CL, *Same as basic*

A3.6. (Added) 1A-10A-2-23JG-1, *Ultra High Frequency (UHF) and Very High Frequency (VHF) Communications*

A3.7. (Added) 1A-10A-2-71JG-2, *APU Operation*

A3.8. (Added) T.O. 00-20-1, *Preventative Maintenance Program System*

A3.9. (Added) AFI 11-218, *Aircraft Operation and Movement on the Ground*

A3.10. (Added) AFI 21-101, *Maintenance Management of Aircraft*

A3.11. (Added) *Engine Run Policies for C-130, F-16, and A-10 Aircraft*

Section B (Added) Cockpit familiarization:

A3.12. (Added) 1A-10A-1, *Flight Manual*

A3.13. (Added) 1A-10A-2-1-1, *General Vehicle Description*

Section C (Added) Ground safety and emergency procedures including operation of normal and emergency brake systems and nose wheel steering:

A3.14. (Added) 1A-10A-1, *Flight Manual*

A3.15. (Added) 1A-10A-2-95JG-1, *Egress Systems Canopy/Seat*

A3.16. (Added) *Crew Escape and Safety*

A3.17. (Added) 1A-10A-2-4JG-1, *Aircraft Safety*

Section D (Added) Radio and intercom systems procedures:

A3.18. (Added) 1A-10A-1, *Flight Manual*

A3.19. (Added) 1A-10A-2-23JG, *Communications Systems*

A3.20. (Added) AFI 11-218, *Aircraft Operation and Movement on the Ground*

Section E (Added) Aircraft and engine servicing and inspection requirements:

A3.21. (Added) 1A-10A-1, *Flight Manual*

A3.22. (Added) 1A-10A-2-12JG, *Aircraft Servicing*

A3.23. (Added) 1A-10A-2-71JG-2, *Engine/APU Operation and Trim*

Section F (Added) Engine start and operating procedures:

A3.24. (Added) 1A-10A-1, *Flight Manual*

A3.25. (Added) 1A-10A-2-71JG-2, *Engine/APU Operation and Trim*

A3.26. (Added) 1A-10A-2-21JG-4, *Environmental Control Systems Rain Removal/Defog*

ATTACHMENT 14.68.A4: (Added) AMXG F-22 Engine Run Qualification Worksheet

A4.1. (Added) The following syllabus will be used as a guide in conducting on-the-job training (OJT) for engine run qualification of installed aircraft engines.

A4.2. (Added) The following technical manuals and instructions will be used in conjunction with OJT:

A4.3. (Added) 1F/A-22A-2-1CL-1, *Engine Start/Shut Down With Emergency Procedures*

A4.4. (Added) TO 1-1-3, *Aircraft Safety*

A4.5. (Added) TO 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*

A4.6. (Added) TO 00-20-1, *Preventative Maintenance Program System*

A4.7. (Added) AFI 11-218, *Aircraft Operation and Movement on the Ground*

A4.8. (Added) AFI 21-101, *Maintenance Management of Aircraft*

ATTACHMENT 14.68.A5: (Added) 309 AMXG Hush House Operation Instructions

A5. (Added) The following checklist will be used as a guide during aircraft engine run-up operations in the A/F37T-10 Hush House located at Area 5187 (Facility 24).

Section A (Added) References:

A5.1. (Added) TO 33D4-6-645-1, *Operation and Maintenance Instructions Enclosed Noise Suppressor System, Aircraft/Engine (Hush House)*

A5.2. (Added) Job Guide 1A-10()-2-71JG-2 Power Plant / APU Operation and Trim

A5.3. (Added) TO 00-25-172,

A5.4. (Added) State of Utah Approval Order Number DAQE-469-94, dated 9 June 1994

Section B (Added) Terms Defined:

A5.5. (Added) Engine Run Supervisor (run technician): Supervises run operations, reviews forms, complies with pre- and post-run inspections, and runs aircraft IAW applicable Job Guide for Engine Operation High Power (restrained).

A5.6. (Added) Hush House Monitor (engine run crew chief): Assists run technician, maintains work document integrity, and ensures completion of all tasks. Maintains checklist discipline while setting up Hush House for operations. Is positioned at control panel to monitor run during emergency situations; takes charge IAW TO 33D4-6-645-1.

A5.7. (Added) Ground Observer: Assists engine run supervisor, assumes position of fire guard during start-up operations, and is ground observer during run.

A5.8. (Added) Enclosed Noise Suppressor: Hush House.

Section C (Added) Pretest Aircraft Operational Procedure:

A5.9. (Added) Prior to use of Hush House, control room monitor will ensure the inspection sign-off is performed on the AFTO Form 244 cards for the day.

NOTE: (Added) Hush House operator will annotate any discrepancies on AFTO Form 244 card.

A5.9.1. (Added) CTK inventory will be accomplished and documented.

A5.10. (Added) Verify Hush House Fire Suppressor System has been checked and is current (within 180 days). Inspection will be annotated on AFTO Form 244. Civil Engineering Squadron (75 CEG) accomplishes the inspection.

A5.11. (Added) Ensure aircraft restraint is current (within 365 days). Inspection will be annotated on AFTO Form 244. The 75 CEG accomplishes the inspection.

A5.12. (Added) Ensure a qualified crew is present.

A5.13. (Added) Set all circuit breakers on.

A5.14. (Added) Adjust lights.

A5.15. (Added) Review manuals for aircraft to be tested.

A5.16. (Added) Check that all manuals needed are on hand.

NOTE: (Added) The following procedures should be performed before aircraft is positioned in the Hush House.

CAUTION: (Added) THRUST ADAPTER MUST BE LOWERED TO FLOOR LEVEL AND PROPERLY STOWED WHILE TESTING AIRCRAFT; OTHERWISE, WIND TURBULENCE MAY CAUSE MOVEMENT OF STAND RESULTING IN DAMAGE TO AIRCRAFT.

A5.17. (Added) Ensure thrust stand adapter is properly positioned and stowed off to side prior to aircraft entry.

A5.18. (Added) Turn on the MD-4 400 cycle skid generator at least 10 minutes prior to aircraft run-up denoted from TO 33D-4-645-1.

Section D (Added) Installing and Running Aircraft:

A5.19. (Added) With the main doors open, position the aircraft using standard aircraft tug operating procedures on the Hush House apron, on the Hush House centerline, nose outward. Then tow the aircraft backward until it is in position in the Hush House. Disconnect nose wheel tow bar. Remove it and the tug from the area.

NOTE: (Added) The aircraft is in position when the main landing gear tires are against the metal wheel chocks and the nose wheel is on the test bay centerline.

A5.20. (Added) Restrain aircraft IAW applicable Technical data for engine operation high power (restrained).

A5.21. (Added) Ensure aircraft is positioned properly in relation to Hush House exhaust tube.

A5.21.1. (Added) (F-16) Ensure that the aircraft tail hook shear bolt is removed.

A5.22. (Added) (F-16) Ensure aircraft restraint is installed and properly secured and metal chocks are installed behind main landing gear tires only.

A5.22.1. (Added) (A-10) Position exhaust deflector behind aircraft and secure to the bay floor.

A5.23. (Added) Ensure two each Hush House personnel doors are unlocked and closed prior to and during Hush House operations.

WARNING: (Added) LOOK T.O. ENSURE NO ONE IS STANDING IN THE PATH OF ANY MOTOR-DRIVEN DOORS AND THAT THERE ARE NO OBSTRUCTIONS PRIOR TO CLOSING. PRESS THE DOOR “STOP” BUTTON IF ANYONE STEPS IN THE PATH OF A CLOSING DOOR. KEEP WATCH UNTIL DOOR IS CLOSED.

A5.24. (Added) Ensure doors are in proper configuration:

A5.24.1. OPEN: (Added) Doors 1, 2, 3, 4, 7, 8, 9, 10, and 11.

A5.24.2. CLOSED: (Added) Doors 5, 6, and the main front doors.

A5.25. (Added) Check inlet baffles and augments tube areas for proper light indication in control room; check serviceability of doors and for FOD in both baffle and bay areas.

A5.26. (Added) Check that portable fire extinguishers are in place and operable, if 150-pound fire extinguishers are available, they will be positioned in marked dead areas of the test bay in front of the control room and equipment wall.

A5.27. (Added) Check that nose wheel elevator is active and can be raised for inspection but is restrained to ground level; ensure it's free of foreign objects.

A5.28. (Added) Ensure any other equipment needed for aircraft testing is available and secure.

A5.29. (Added) Ensure all emergency exit pathways are free of obstruction. Remove snow and ice from these areas during winter months. *Urea* is the only chemical means of snow removal permitted at an aircraft run-up facility.

NOTE: (Added) *Urea* is ineffective on solid ice below 32°F and during windy conditions.

A5.30. (Added) Ensure aircraft is properly grounded.

A5.31. (Added) Press the "TEST START" button on console. Ensure the siren will sound for a period, and then stop automatically. The "Testing" signs at doors will illuminate and remain on.

A5.32. (Added) Read the manometer before and during an engine test. If the pressure drop exceeds 4.5 differential inches of water, cease operation.

A5.33. (Added) Log in aircraft serial number and engine run time IAW state of Utah approved order number DAQE-469-94.

A5.34. (Added) (F-16) Augmenter cool-down must be performed. After a run at high power settings, the augmenter must be cooled by running engines at idle or a moderate power setting at least 5 minutes to cool the augmenter tube before shutdown.

Section E (Added) Safety:

A5.35. (Added) Only Hush House operator is allowed in control room during aircraft maintenance run. (The only exceptions will be approved by the Hush House operator.) Exceptions are limited to training requirements, pre-approved visitors to observe Hush House operations, personnel required to monitor the run as part of their job; i.e., AFET personnel.

A5.36. (Added) Brief that only two personnel are allowed in test bay area during aircraft operation. Communications will be established prior to engine start. Minimum communication required is between the operators, all ground persons, and the control room. Prior to start, ground personnel must give verbal confirmation to run technician that it is clear to start.

NOTE: (Added) Communication **MUST** be maintained at all times during run.

A5.37. (Added) In annual supervisor's safety briefing: Brief personnel of fire and emergency procedures, location of both personnel exit doors, fire extinguisher locations, firefighting procedures, and 10-second delay in foam suppression system. Foam is non-toxic to persons who may be trapped in the space since air entrained in foam is drawn from outside the Hush House and generally not contained. However, because of the foam bubbles, some difficulty in breathing may be experienced. Entering a foam-filled space should be avoided unless adequate precautions are taken due to vision impairment and disorientation, which may introduce life and injury hazards. Each 5-minute foam generation sequence will provide over four meters of foam submergence throughout the Hush House.

NOTE: (Added) The system is designed to provide four, 5-minute foam generation cycles before depleting the initial water supply.

A5.38. (Added) The following procedures will be followed during an emergency:

A5.38.1. (Added) Maintain verbal communications via headsets between all personnel until area is evacuated.

A5.38.2. (Added) Specify emergency; normally, the observing technician would report to other personnel during immediate evacuation the type and severity of problem. Example: fire (fuel or electrical) or whether a severe leak or loose object is present.

A5.38.3. (Added) Run technician will perform shut down procedure. Ground crew will fight fire, if feasible, while control room monitor will monitor emergency and take appropriate action to activate fire suppression system. *Press and hold "FIRE" push button for at least 5 seconds and evacuate personnel.

A5.38.4. (Added) Assigned personnel will, if feasible, attempt to control the fire by use of a portable fire extinguisher. No attempt should be made to fight a fire which is obviously too large to control with fire extinguishers.

NOTE: (Added) When there is a fire in any building, immediate action must be taken to evacuate personnel, notify the fire department, and try to control the fire.

A5.38.5. (Added) Emergency numbers are posted, land lines are provided and the control room is always manned. Notify the fire department by using 911 button on phone and report:

A5.38.5.1. (Added) Aircraft fire in Building 5187.

A5.38.5.2. (Added) Number of personnel in aircraft.

A5.38.5.3. (Added) Injuries (if any).

A5.38.5.4. (Added) Name of caller.

A5.38.6. (Added) Notify the 309 AMXG Control Center, Building 225, at 777-2812/777-2818, of an emergency.

NOTE: (Added) On weekends, or when the 309 AMXG Control Center is not in operation, contact the 309 MXW Alert Center (309 MXW/WOC) at 777-3238/7-3756.

A5.38.7. (Added) Hush House Control Room monitor will be the last individual to leave the Hush House, ensuring all personnel have been accounted for and have evacuated to a rally point in front of the building.

A5.38.8. (Added) Brief ground personnel of high wind areas from baffle areas.

WARNING: (Added) Close Hush House doors when wind velocity exceeds 40 knots. This information may be obtained from 309 MXW/WOC at 777-3238/777-3756.

A5.39. (Added) Brief all personnel of FOD awareness and preventative measures (i.e., security of line badge, hats, pens, tools, aircraft panels, etc.).

A5.40. (Added) Clean up all oil and fuel off floor with rags. Return to Building 233 for disposal.

A5.41. (Added) Brief that dual ear protection (ear plugs and headset) must be worn when in test bay.

A5.42. (Added) Have run technician brief danger areas of aircraft operations to ground crew (i.e., PTO area, moving surfaces, and hydrazine areas).

Section F - (Added) Removing Aircraft:

NOTE: (Added) Post-run operations will be conducted IAW the applicable job guide.

A5.44. (Added) Open the following doors: 5, 6, and the main doors.

A5.45. (Added) Close the following doors: 1, 2, 3, 4, 7, 8, 9, 10, and 11.

A5.46. (Added) Using standard aircraft tug operating procedures, connect tug to aircraft, remove chocks and restraints, and tow the aircraft straight out.

A5.47. (Added) Turn all lights off and close all doors.

Figure 14.68.A5: (Added) 309 AMXG Hush House Operation Instructions

STRUCTURED ON-THE-JOB TRAINING (SOJT) WORKSHEET					
<u>A-10 Engine Run Hush House Preparation</u>				<u>Crs No.</u>	
				<u>Local Course No</u>	
Name:		TSS ID#:		Organization:	
<u>Prerequisite Training Status:</u> (List all training requirements for this SOJT, Tracking #, Title and Date completed.)					
	NONE				
<u>Demonstrate Tasks @ Proficiency Level B & 3b:</u> Trainee: (B) Can identify relationship of basic facts and state general principles about subject. (3b) Can do all parts of the task. Needs only spot check of completed work. Can determine the step-by-step procedures for doing the task.				Initials SOJT Employee	Initials SOJT Trainer
(List all training requirements below – from general to specific. Identify knowledge/task references, TOs, directives.)					
2-1. State general safety procedures associated with the A/F37T10 Hush House operations. (TO 33D4-6-645-1 and AFOSH Standard 91-100) (B)					
2-2. Identify general aircraft safety precautions and danger areas.(TO 1A-10 ()-2-71JG-2					
3-1. Perform Hush House pretest set-up procedures. (TO 33D4-6-645-1, TO 00-20-1, AMXG OI 21-44)					
3-2. Perform the aircraft set-up procedures. .(TO 1A-10 ()-2-71JG-2					
3-3. Input required information into the Jet Engine Test System. (JETS System User Manual) (3b)					
SOJT Employee Name (print):					
SOJT Employee Signature:				Date:	
SOJT Trainer/Qualifier Name (print)					
SOJT Trainer/Qualifier Signature:				Date:	
Supervisor Name (print):					
Supervisor Signature:				Date:	

ATTACHMENT 14.70.A1 (Added)

NDI CLASSROOM TRAINING COURSE OUTLINE

LIQUID PENETRANT TESTING - LEVEL I/II

32 HOURS

1. Scope Of The Liquid Penetrant Operations at 309 MXSG/MXRILN

- 1.1. History of testing
- 1.2. Purpose of liquid Penetrant testing
- 1.3. Basic principles of testing
- 1.4. Overview present applications
- 1.5. Prospect for future applications

2. Liquid Penetrant Theory

- 2.1. Capillary action
- 2.2. Define hydrophilic
- 2.3. Define lipophilic
- 2.4. Purpose of emulsifiers/removers
- 2.5. How emulsifiers/removers work
- 2.6. Purpose of developers
- 2.7. Purpose of black light

3. Liquid Penetrant Processes

- 3.1. Preparation of parts
- 3.2. Types of Penetrant and sensitivity levels
- 3.3. Application of Penetrant to parts
- 3.4. Removal of surface Penetrant
 - 3.4.1. Method A
 - 3.4.2. Method B
 - 3.4.3. Method C
 - 3.4.4. Method D
- 3.5. Forms of developers (a-f)
- 3.6. Developer application and drying
- 3.7. Inspection and evaluation
- 3.8. Post cleaning

4. Penetrant Testing Equipment

- 4.1. Penetrant dip tank/spray systems
- 4.2. Emulsifier dip tank/spray systems
- 4.3. Remover bath/spray systems
- 4.4. Water rinse station
- 4.5. Drying oven
- 4.6. Developer dip/spray/dusting systems
- 4.7. Inspection booth
- 4.8. Black lights

5. Selection Of The Appropriate Method.

6. Inspection And Evaluation Of Indications.

- 6.1. General

- 6.1.1. Inherent discontinuities
- 6.1.2. Appearance of indications
- 6.1.3. Time for indications to appear
- 6.2. Indications from cracks
- 6.3. Indications from porosity
- 6.4. Metal processing indications
 - 6.4.1. Forging
 - 6.4.2. Casting
 - 6.4.3. Rolling
 - 6.4.4. Welding
 - 6.4.5. Drawing & extrusion
 - 6.4.6. Indication interpretation & evaluation
 - 6.4.7. False indication
 - 6.4.8. Non relevant indication
 - 6.4.9. Relevant indication
 - 6.4.10. Discontinuity
 - 6.4.11. Defect

7. Inspection Procedures And Standards

- 7.1. ASTM E 1417
- 7.2. SAE AMS 2644
- 7.3. T.O. 33B-1-1
- 7.4. T.O. 33B-1-2
- 7.5. DPS 4.704
- 7.6. BSS 7039

ATTACHMENT 14.70.A2 (Added)

NDI Classroom Training Course Outline

MAGNETIC PARTICLE TEST METHOD - LEVEL I/II

32 HOURS

1. Principles Of Magnets And Magnetic Fields

- 1.1. Theory of magnetic fields
 - 1.1.1. Earth's magnetic field
 - 1.1.2. Magnetic fields around magnetized materials
 - 1.1.3. Materials influenced by magnetic fields
 - 1.1.4. Ferromagnetic
 - 1.1.5. Paramagnetic
 - 1.1.6. Diamagnetic
- 1.2. Theory of magnetism
 - 1.2.1. Magnetic poles
 - 1.2.2. Flux patterns
 - 1.2.3. Internal and external flux patterns
 - 1.2.4. Distance factors vs. flux strength
 - 1.2.5. Law of magnetism
 - 1.2.6. Magnetic Hysteresis (B-H Curve)
 - 1.2.7. Curie temperature
 - 1.2.8. Hardness
- 1.3. Terminology associated with magnetic particle testing

2. Characteristics Of Magnetic Fields

- 2.1. Bar magnet
- 2.2. Ring magnet

3. Effect Of Discontinuities Of Materials

- 3.1. Surface cracks
- 3.2. Scratches
- 3.3. Subsurface defects

4. Magnetization By Means Of Electric Current

- 4.1. Circular field
 - 4.1.1. Field around a straight conductor
 - 4.1.2. Right hand rule
 - 4.1.3. Field in parts through which current flows
 - 4.1.4. Long, solid, cylindrical, regular parts
 - 4.1.5. Irregularly shaped parts
 - 4.1.6. Tubular parts
 - 4.1.7. Parts' containing machined holes, slots, etc
 - 4.1.8. Method of direct circular magnetization
 - 4.1.9. Contact plates
 - 4.1.9.1. Prods (illegal in AF)
 - 4.1.9.2. Method of induced circular magnetization
 - 4.1.10. Current calculations

- 4.1.11. Depth-factor considerations
- 4.1.12. Safety and overheating
- 4.1.13. Contact prods and yokes
- 4.1.14. Common discontinuities detected
- 4.1.13. Discontinuities commonly detected by circular fields
- 4.2. Longitudinal field
 - 4.2.1. Field produced by current flow in a coil
 - 4.2.2. Field direction in a current-carrying coil
 - 4.2.3. Field strength in current-carrying coil
 - 4.2.4. Principles of induced flux fields
 - 4.2.5. Geometry of part
 - 4.2.6. Shapes and sizes of coils
 - 4.2.7. Use of coils and cables
 - 4.2.8. Strength of field
 - 4.2.9. Current directional flow vs. flux field
 - 4.2.10. Shapes, sizes, and current capacities
 - 4.2.11. Current calculations
 - 4.2.12. Formulas
 - 4.2.13. Types of current required
 - 4.2.14. Current demand
 - 4.2.15. Discontinuities commonly detected with longitudinal fields
 - 4.2.16. Advantages/disadvantages

5. Flux Fields

- 5.1. Direct Current (DC)
 - 5.1.1. Depth of penetration factors
- 5.1.2. Source of current
- 5.2. Direct pulsating current
 - 5.2.1. Similarity to direct current
- 5.2.2. Advantages
- 5.2.3. Typical fields
- 5.3. Alternating current
 - 5.3.1. Cyclic effects (frequency)
 - 5.3.2. Surface strength characteristics
 - 5.3.3. Safety precautions
 - 5.3.4. Voltage and current factors
 - 5.3.5. Source of current

6. Selecting The Proper Method Of Magnetization

- 6.1. Alloy, shape, hardness, and condition of part
- 6.2. Type of magnetizing current
 - 6.2.1. Direction of magnetic field
- 6.3. Value of flux density
- 6.4. Sequence of operations
 - 6.4.1. Wet continuous method of processing
 - 6.4.2. Residual method of processing

7. Inspection Materials

- 7.1. Wet bath
- 7.1.2. Particles
- 7.1.3. Fluorescent
- 7.1.4. Visible
- 7.1.5. Baths
- 7.1.7. Oil
- 7.1.8. Water
- 7.2. Visible dry particles
- 7.3. Visible magnetic rubber

8. Demagnetization

- 8.1. Residual magnetism.
- 8.2. Coercive force
- 8.3. Need for demagnetization
- 8.4. Longitudinal and circular residual field strength checks
 - 8.4.1. Field indicator
 - 8.4.2. Hall effect probe (Gauss meter)
 - 8.4.3. Eddy current
 - 8.4.4. Compass
 - 8.4.5. Steel wire, paper clip, or feeler stock
- 8.5. Current, frequency, and field orientation
- 8.6. Heat factors and precautions
- 8.7. Collapsing flux fields
- 8.8. Methods of demagnetization

9. Magnetic Particle Testing Equipment

- 9.1. Selection considerations
 - 9.1.1. Type of magnetizing current
 - 9.1.2. Location and nature of test
 - 9.1.3. Test materials used
 - 9.1.4. Purpose of test
 - 9.1.5. Area inspected
- 9.2. Manual inspection equipment
 - 9.2.1. Stationary
 - 9.2.3. Mobile
 - 9.2.3. Portable
- 9.3. Mechanized inspection equipment
- 9.4. Black lights

10. Quality Control

- 10.1. Malfunctioning equipment
- 10.2. Settling test
 - 10.2.1. Proper magnetic particle strength
 - 10.2.2. Contamination
- 10.3. System Effectiveness
 - 10.3.1. Ketos ring
 - 10.3.2. Cracked parts
 - 10.3.3. Quantitative Quality Indicators and other shims

- 10.4. Quick break
- 10.5. Ammeter checks
- 10.6. Black light intensity
- 10.7. Yoke dead weight check
- 10.8. Water bath water break test

11. Types Of Discontinuities Detected By Magnetic Particle Testing

- 11.1. Inclusions
- 11.2. Blowholes
- 11.3. Porosity
- 11.4. Flakes
- 11.5. Cracks
- 11.6. Pipe
- 11.7. Laminations
- 11.8. Laps
- 11.9. Forging bursts
- 11.10. Voids
- 11.11. Seams

12. Inspection Procedures And Standards

- 12.1. T.O. 33B-1-1
- 12.2. T.O. 33B-1-2
- 12.3. ASTM E 1444
- 12.4. SAE AS5282
- 12.5. DPS 4.707
- 12.6. BSS 7040

ATTACHMENT 14.70.A3 (Added)

NDI Classroom Training Course Outline

Eddy Current Test Method - Level I

40 HOURS

1. Introduction To Electromagnetic Testing

- 1.1. History of testing
- 1.2. Basic principles of testing

2. Electromagnetic Theory

- 2.1. Principles of electricity
 - 2.1.1. Current flow (EMF)
 - 2.1.2. Resistance
 - 2.1.3. Conductivity
 - 2.1.4. $E=I \times R$
- 2.2. Eddy current theory
 - 2.2.1. Define terminology associated with eddy current theory
 - 2.2.2. Generation of eddy currents by means of an AC magnetic field
 - 2.2.3. Effect of fields created by eddy currents (impedance changes)
 - 2.2.4. Effect of impedance change on instrumentation
 - 2.2.5. Properties of eddy currents
 - 2.2.5.1. Travel in circular direction
 - 2.2.5.2. Strongest on surface
 - 2.2.5.3. Value in various conductors
 - 2.2.5.4. Amount of current flow
 - 2.2.5.5. Relationship of frequency and plane with current in coil.
 - 2.2.5.6. Effect of permeability variations when induced in magnetic materials
 - 2.2.5.7. Effect of discontinuity orientation
 - 2.2.5.8. Relationship of frequency, conductivity and permeability to depth of penetration and sensitivity
- 2.3. Flux leakage theory
 - 2.3.1. Terminology and units
 - 2.3.2. Principles of magnetization
 - 2.3.2.1. B-H curve
 - 2.3.2.2. Magnetic field
 - 2.3.2.3. Hysteresis loop
 - 2.3.2.4. Factors affecting permeability
 - 2.3.3. Magnetization - electromagnetism theory
 - 2.3.3.1. Oersted's law
 - 2.3.3.2. Faraday's law
 - 2.3.4. Flux leakage theory and principle
 - 2.3.4.1. Residual
 - 2.3.4.2. Active
 - 2.3.4.3. Tangential leakage
 - 2.3.4.4. Normal leakage

3. Display Of Eddy Current Responses

- 3.1. Meters
 - 3.1.1. Calibrated and uncalibrated
 - 3.1.2. Null meter with dial indicator
- 3.2. Oscilloscope
 - 3.2.1. Vector point display
 - 3.2.2. Linear time base display
 - 3.2.3. Lassajous display
- 3.3. Alarms
- 3.4. Marking system
- 3.5. Automation and feedback
- 3.6. Strip chart recorder

4. Eddy Current Sensing Elements.

- 4.1. Probes
 - 4.1.1. Absolute
 - 4.1.2. Differential
 - 4.1.3. Theory of operation
 - 4.1.4. Applications
 - 4.1.5. Advantages/limitations
- 4.2. Through, encircling, or annular coils
 - 4.2.1. Types of arrangements
 - 4.2.1.1. Absolute
 - 4.2.1.2. Differential
 - 4.2.2. Fill factor
 - 4.2.3. Theory of operation
 - 4.2.4. Applications
 - 4.2.5. Advantages/Limitations
- 4.3. Factors affecting choice of sensing elements
 - 4.3.1. Type of part to be inspected
 - 4.3.2. Type of discontinuity to be detected
 - 4.3.3. Speed of testing required
 - 4.3.4. Quantity of parts
 - 4.3.5. Location of discontinuity

5. Eddy Current Safety

- 5.1. Electrical.
- 5.2. Moving equipment

6. NORTEC 2000D Equipment Familiarization.

ATTACHMENT 14.70.A4 (Added)

NDI Classroom Training Course Outline

Eddy Current Test Method - Level II

40 HOURS

1. Review Of Electromagnetic Theory

- 1.1. History of testing
- 1.2. Flux leakage theory

2. Factors That Affect Coil Impedance

- 2.1. Test part
 - 2.1.1. Conductivity
 - 2.1.2. Permeability
 - 2.1.3. Mass
 - 2.1.4. Homogeneity
- 2.2. Test system
 - 2.2.1. Frequency
 - 2.2.2. Coupling
 - 2.2.3. Field strength
 - 2.2.4. Test coil and shape

3. Factors That Affect Flux Leakage Fields

- 3.1. Degree of magnetization
- 3.2. Defect geometry
- 3.3. Defect location
- 3.4. Defect orientation
- 3.5. Distance between adjacent defects

4. Operation Theory Of Different Types Of Equipment

- 4.1. Functions of the components in impedance type equipment
 - 4.1.1. Oscillator
 - 4.1.2. Test coil
 - 4.1.3. Bridge circuit
 - 4.1.4. Amplifier
 - 4.1.5. Readout
 - 4.1.6. Secondary eddy
- 4.2. Functions of the components in phase analysis type equipment
 - 4.2.1. Test coil
 - 4.2.2. Bridge circuit
 - 4.2.3. Oscillator
 - 4.2.4. Phase control
 - 4.2.5. Timing circuit
 - 4.2.6. Amplifier
 - 4.2.7. Oscilloscope
 - 4.2.8. Eddy currents
- 4.3. Functions of the components in modulation analysis type equipment
 - 4.3.1. Test coil

- 4.3.2. Bridge equipment
- 4.3.3. Oscillator
- 4.3.4. Amplifier
- 4.3.5. Timing
- 4.3.6. Probe or material drive system
- 4.3.7. Band pass filters
- 4.4. Relationship of eddy current (secondary) sensing element and balance circuit (primary)
 - 4.4.1. Impedance
 - 4.4.2. Phase analysis
 - 4.4.3. Modulation analysis

5. Signal-To-Noise Ratio

- 5.1. Definition
- 5.2. Relationship to eddy current testing
- 5.3. Methods of improving signal-to-noise ratio

6. Selection Of Test Frequency

- 6.1. Relationship of frequency to type of test
- 6.2. Considerations affecting choice of test
 - 6.2.1. Signal-to-noise ratio
 - 6.2.2. Phase discrimination
 - 6.2.3. Response speed
 - 6.2.4. Skin effect

7. Coupling

- 7.1. Fill factor" in through-coil inspection
- 7.2. "Lift-off" and compensation in probe coil

8. Field Strength And Its Selection

- 8.1. Permeability changes
- 8.2. Saturation
- 8.3. Effects of AC field strength on eddy current testing

9. Perform Eddy Current Inspection Calibration

- 9.1. Use of eddy current standards
- 9.2. Lift off compensation.
- 9.3. Define sensitivity
- 9.4. Types of standards
 - 9.4.1 Crack (actual/artificial)
 - 9.4.2. Conductivity
 - 9.4.3. Metal Thickness
 - 9.4.4. Nonconductive Coating Thickness
 - 9.4.5. Flat, radius, and bolt hole

10. Surface Preparation Required For Eddy Current Inspection

- 10.1. Cleanliness
- 10.2. Surface condition
- 10.3. Bolt holes
- 10.4. Coatings
- 10.5. Thickness

10.6. Conductivity

11. Applications

11.1. Aircraft

11.2. Engines

12. Eddy Current Standards

12.1. SAE AMS-H-6088 (Heat Treatment of Aluminum Alloys, Conductivity Tables)

12.2. T.O. 33B-1-1

12.3. T.O. 33B-1-2

13. Eddy Current Safety

13.1. Electrical

13.2. Moving equipment

14. NORTEC 2000D Equipment Operation/Applications

ATTACHMENT 14.70.A5 (Added)

NDI Classroom Training Course Outline

Ultrasonic Test Method - Level I

40 HOURS

1. Introduction

- 1.1. Definition of ultrasonic
- 1.2. History of ultrasonic testing
- 1.3. Applications of ultrasonic energy
- 1.4. Basic math review
- 1.5. Responsibilities of levels of certification

2. Basic Principles Of Acoustics

- 2.1. Nature of sound waves
- 2.2. Modes of sound-wave generation
 - 2.2.1. Compression
 - 2.2.2. Rarefaction
 - 2.2.3. Amplitude
- 2.3. Waves
 - 2.3.1. Compressional
 - 2.3.2. Transverse
 - 2.3.3. Surface
 - 2.3.4. Lamb
- 2.4. Velocity
 - 2.4.1. Material density
 - 2.4.2. Modulus of elasticity
 - 2.4.3. Poisson's Ratio
- 2.5. Frequency
- 2.6. Wavelength
 - 2.6.1. Sensitivity
 - 2.6.2. Penetrating power
- 2.7. Relationship between velocity, frequency, and wavelength
- 2.8. Acoustic impedance
- 2.9. Reflection
- 2.10. Refraction and mode-conversion
- 2.11. Snell's law
 - 2.11.1. First critical angle (shear wave)
 - 2.11.2. Second critical angle (surface wave)
- 2.12. Dead, Fresnel and Fraunhofer zones
 - 2.12.1. Dead zone
 - 2.12.2. Near field
 - 2.12.3. Far field
 - 2.12.3.1. Beam spread angle
 - 2.12.3.2. Intensity variations
- 2.13. Attenuation
 - 2.13.1. Surface condition

- 2.13.2. Beam divergence
- 2.13.3. Scatter
- 2.13.4. Absorption

3. Testing Methods

- 3.1. Pulse echo method
 - 3.1.1. Electronics- time base, pulser, receiver, and screen display
 - 3.1.2. Calibration
 - 3.1.3. Advantages and disadvantages
 - 3.1.4. Applications
 - 3.1.5. Presentation
- 3.2. Through transmission
 - 3.2.1. Transducer requirements
 - 3.2.2. Applications
 - 3.2.3. Presentation
- 3.3. Resonance
 - 3.3.1. Transducer requirements
 - 3.3.2. Advantages and disadvantages
 - 3.3.3. Applications
- 3.4. Displays
 - 3.4.1. A-scan
 - 3.4.2. B-scan
 - 3.4.3. C-scan
- 3.5. Contact
 - 3.5.1. Straight-beam
 - 3.5.2. Angle-beam
 - 3.5.3. Surface-wave
 - 3.5.4. Pulse-echo/Thru-transmission
 - 3.5.5. Curved surfaces
- 3.6. Immersion
 - 3.6.1. Bubbler/squirter/wheel arrangements
 - 3.6.2. Submerged test part/transducer
 - 3.6.3. Sound-beam path-transducer to part
 - 3.6.4. Focused transducers
 - 3.6.5. Curved surfaces
 - 3.6.6. Shear wave in part
- 3.7. Comparison of contact and immersion methods

4. Transducer Operation And Coupling

- 4.1. Piezoelectric effect
- 4.2. Types of crystals
- 4.3. Frequency (thickness of crystal)
- 4.4. Construction, materials, and damping
- 4.5. Beam-intensity characteristics
- 4.6. Sensitivity
- 4.7. Resolution
- 4.8. Damping
- 4.9. Couplants

- 4.9.1. Purpose and principles
- 4.9.2. Materials and their efficiency

5. Calibration

- 5.1. Variable effects
- 5.2. Transmission accuracy
- 5.3. Calibration requirements
- 5.4. Standard reflectors
 - 5.4.1 ASTM E 127-94, Aluminum FBH standards
 - 5.4.2. IIW Block Type 2
 - 5.4.3. Miniature angle beam block
 - 5.4.4. Part specific standards

6. Typical Ultrasonic Instrument

- 6.1. Display
- 6.2. Timer
- 6.3. Power supply
- 6.4. Amplifier
- 6.5. Sweep generator
- 6.6. Sweep length
- 6.7. Delay
- 6.8. Pulser
- 6.9. Pulse rate
- 6.10. Pulse length

7. Straight-Beam Examination To Specific Procedures

- 7.1. Selection of parameters
- 7.2. Test standards
- 7.3. Evaluation of results
- 7.4. Test reports

8. Angle Beam Examination To Specific Procedures

- 8.1. Selection of parameters
- 8.2. Test standards
- 8.3. Evaluation of results
- 8.4. Test reports

9. USN-52 Equipment Familiarization

ATTACHMENT 14.70.A6 (Added)

NDI Classroom Training Course Outline

Ultrasonic Test Method - Level II

40 HOURS

1. Review Of Ultrasonic Theory

- 1.1. Nature of sound waves
- 1.2. Modes of sound-wave generation
- 1.3. Velocity, frequency, and wavelength
- 1.4. Attenuation of sound waves
- 1.5. Acoustic impedance
- 1.6. Reflection
- 1.7. Refraction and mode-conversion
- 1.8. Snell's law and critical angles
- 1.9. Dead zone, Fresnel, and Fraunhofer effects

2. Equipment

- 2.1. Transducer operation and theory
 - 2.1.1. Piezoelectric effect
 - 2.1.2. Types of crystals
 - 2.1.3. Frequency (crystal thickness relationships)
 - 2.1.4. Construction, materials, and shapes
 - 2.1.5. Types (straight, angle, dual, etc.)
 - 2.1.6. Beam intensity characteristics
 - 2.1.7. Sensitivity, resolution, and squirters
- 2.2. Pulse echo
- 2.3. Through transmission
- 2.4. Displays
 - 2.4.1. A-scan
 - 2.4.2. B-scan
 - 2.4.3. C-scan
- 2.5. Bond testing
 - 2.5.1. Ringing method (Pulse-echo)
 - 2.5.2. Through transmission
 - 2.5.3. Low frequency burst
 - 2.5.4. Resonance
 - 2.5.5. Mechanical Impedance Analysis
 - 2.5.6. Pitch/Catch
 - 2.5.7. Tap test -vs. - bond testing equipment
 - 2.5.8. Thickness Gauging
 - 2.5.9. Pulse Echo (IP to first back echo)
 - 2.5.10. Pulse Echo (multiple to multiple).
- 2.6. Resonance
- 2.7. Automated Equipment

3. Calibration

- 3.1. Reference reflectors for calibration

- 3.1.1. Balls, SDHs and FBHs
- 3.1.2. Area amplitude blocks
- 3.1.3. Distance amplitude blocks
- 3.1.4. Notches
- 3.1.5. IIW and miniature blocks
- 3.1.6. Distance amplitude correction or TCG
- 3.1.7. Angle beam distance calibration with IIW or miniature
- 3.2. System effectiveness
 - 3.2.1. Vertical linearity
 - 3.2.2. Horizontal linearity
 - 3.2.3. Sensitivity
 - 3.2.4. Resolution
 - 3.2.5. Beam angle determination
 - 3.2.6. Skew angle determination

4. Discontinuity Detection

- 4.1. Sensitivity to reflectors
 - 4.1.1. Size
 - 4.1.2. Type
 - 4.1.3. Orientation
 - 4.1.4. Distance
- 4.2. Resolution
- 4.3. Determining size of flaw
- 4.4. Determining location of flaw

5. Evaluation Of Bonded Structures

- 5.1. Manufacturing processes
- 5.2. Types of discontinuities
- 5.3. Origin of discontinuities
- 5.4. Response of discontinuities

6. Evaluation Of Weldments

- 6.1. Welding processes
- 6.2. Weld geometry's
- 6.3. Welding discontinuities
- 6.4. Origin of discontinuities
- 6.5. Response of discontinuities to ultrasound
- 6.6. Using ultrasonic calculator
- 6.5. Reference radiographs or pictograms

7. Standards, Codes, And Procedures For Ultrasound

- 7.1. ASTM
 - 7.1.1. E 127-94
 - 7.1.2. E 317-94
- 7.2. T.O. 33B-1-1
- 7.3. T.O. 33B-1-2
- 7.4. AFOSH Standard 91-110

8. USN-52 Equipment Applications

ATTACHMENT 14.70.A7 (Added)
NDI Classroom Training Course Outline

Radiographic Test Method - Level I

40 HOURS

1. Introduction To Radiographic Testing

- 1.1. History and discovery of radioactive materials
- 1.2. Definition of industrial radiography
- 1.3. Radiation protection
- 1.4. Basic math review: exponents, logarithms, square root, algebra, and trigonometry

2. Fundamental Properties Of Matter

- 2.1. Elements and atoms
- 2.2. Molecules and compounds
- 2.3. Atomic particles
 - 2.3.1. Protons
 - 2.3.2. Electrons
 - 2.3.3. Neutrons
 - 2.3.4. Atomic structure
 - 2.3.5. Atomic number and weight
 - 2.3.6. Isotope vs. radioisotope

3. Radioactive Materials

- 3.1. Production
 - 3.1.1. Neutron activation
 - 3.1.2. Nuclear fission
 - 3.1.3. Stability of atoms vs. instability of radioactive atoms
 - 3.1.4. Curie – the unit of activity
 - 3.1.5. Half-life of radioactive materials
 - 3.1.6. Plotting radioactive decay
 - 3.1.7. Specific activity

4. Types Of Radiation

- 4.1. Particulate radiation - properties: alpha, beta, and neutron
- 4.2. Electromagnetic radiation - X-ray, gamma ray
- 4.3. X-ray production
 - 4.3.1. Cathode-electron source
 - 4.3.2. Anode-target
 - 4.3.3. How electrons are accelerated
 - 4.3.4. Milliamperage
 - 4.3.5. Kilovoltage
 - 4.3.6. Focal Spot
 - 4.3.7. Tube head construction
- 4.4. Gamma-ray production
 - 4.4.1. Gamma-ray energy
 - 4.4.2. Energy characteristics of common radioisotopes
- 4.5. Energy characteristics of X-ray Machines

5. Interaction Of Radiation With Matter

- 5.1. Ionization
- 5.2. Radiation interaction with matter
 - 5.2.1. Photoelectric effect
 - 5.2.2. Compton scattering
 - 5.2.3. Pair production
- 5.3. Unit of exposure- the Roentgen
- 5.4. Emissivity of commonly used radiographic sources
- 5.5. Emissivity of X-ray exposure devices
- 5.6. Attenuation of electromagnetic radiation - shielding
- 5.7. Half-value layers; tenth-value layers
- 5.8. Inverse square law

6. Radiation Safety

- 6.1. Biological Effects of Radiation
 - 6.1.1. "Natural" background radiation
 - 6.1.2. Unit of radiation dose - REM
 - 6.1.3. Allowable personnel exposure limits
 - 6.1.4. Radiation damage
 - 6.1.5. Symptoms of radiation injury
 - 6.1.6. Acute radiation exposure
 - 6.1.7. Personnel monitoring
 - 6.1.8. Organ radio sensitivity
- 6.2. As Low As Reasonably Achievable (ALARA) Concept/training
 - 6.2.1. AFI 40-201, Managing Radioactive Materials in USAF
 - 6.2.2. AFI 48-125
- 6.3. Radiation Detection
 - 6.3.1. Pocket Dosimeter
 - 6.3.1.1. Reading of pocket dosimeters
 - 6.3.1.2. Recording of daily dosimeter readings
 - 6.3.2. Using digital alarming dosimeter
 - 6.3.3. Difference between dose and rate
 - 6.3.4. Survey instruments
 - 6.3.4.1. Geiger-Muller tube
 - 6.3.4.2. Ionization chambers
 - 6.3.4.3. Scintillation chambers, counters
 - 6.3.4.4. Operation and calibration
 - 6.3.4.5. Calibration frequency
 - 6.3.4.6. Battery Check
 - 6.3.5. Film badges
 - 6.3.6. Thermo luminescent dosimeters
- 6.4. Radiation Surveys
 - 6.4.1. Unshielded area
 - 6.4.2. Shielded area
- 6.5. Radiographic work practices
 - 6.5.1. Establishment of restricted areas
 - 6.5.2. Posting and surveillance of restricted areas

- 6.5.3. Use of time, distance, and shielding to reduce personnel exposure
- 6.5.4. Emergency procedures (director specific operating instructions)

7. Exposure Devices

- 7.1. Radioisotope Sources
 - 7.1.1. Sealed-source design and fabrication
 - 7.1.2. Gamma ray sources
 - 7.1.3. Neutron sources
- 7.2. Electronic radiation sources - 500 KV and less
 - 7.2.1. Generator-high voltage rectifiers
 - 7.2.1.1. Full wave rectified generator. (no longer covered in 33B?)
 - 7.2.1.2. Constant potential generator. (no longer covered in 33B?)
 - 7.2.2. X-ray tube design. (no longer covered in 33B?)
 - 7.2.3. X-ray control circuits. (no longer covered in 33B?)
 - 7.2.3.1. Center-tap grounded generator
 - 7.2.3.2. Anode grounded generator
 - 7.2.3.3. Cathode grounded generator
 - 7.2.4. Accelerating potential
 - 7.2.5. Target material and configuration
 - 7.2.6. Heel effect
 - 7.2.7. Heat dissipation
 - 7.2.8. Duty cycle
 - 7.2.9. Beam filtration
- 7.3. High energy. (no longer covered in 33B?)
 - 7.3.1. Van de Graaff accelerator
 - 7.3.2. Linear accelerator
 - 7.3.3. Betatron
- 7.4. Radioscopy
 - 7.4.1. Fluoroscopic equipment design
 - 7.4.2. Image intensifiers
 - 7.4.3. Screens
 - 7.4.4. Cameras
 - 7.4.5. Image enhancement

8. Radiographic Technique

- 8.1. Introduction
 - 8.1.1. Electromagnetic spectrum
 - 8.1.2. Penetrating ability or "quality" of X-rays and gamma rays
 - 8.1.3. Spectra of X-ray sources and of gamma ray sources
 - 8.1.4. Changes in MA and KVP effect on "quality" and intensity of X-rays
 - 8.1.5. Basic principles of radiography
- 8.2. Geometric exposure principles
 - 8.2.1. Geometric exposure principles
 - 8.2.2. "Shadow" formation and distortion
 - 8.2.3. Shadow enlargement calculation
 - 8.2.4. Geometric unsharpness
 - 8.2.5. Finding discontinuity depth
 - 8.2.6. Composition of industrial radiographic film
 - 8.2.7. Base

- 8.2.8. Emulsion
- 8.3. Radiographs
 - 8.3.1. Formation of the latent image on the film
 - 8.3.2. Inherent unsharpness
 - 8.3.3. Radiographic exposure math
 - 8.3.3.1. Milliamperage-distance-time relationship
 - 8.3.3.2. Reciprocity law
 - 8.3.3.3. Film density
 - 8.3.3.4. X-ray exposure charts-material, thickness, kV, and exposure
 - 8.3.3.5. Inverse Square law considerations
 - 8.3.4. Characteristic curve or Hurter and Driffield (H&D) curve
 - 8.3.5. Film speed and class descriptions
 - 8.3.6. Selection of film
 - 8.3.7. Radiographic screens
 - 8.3.7.1. Lead intensifying screens
 - 8.3.7.2. Screen to film contact
 - 8.3.7.3. Filtering screens
- 8.4. Radiographic image quality
 - 8.4.1. Radiographic sensitivity
 - 8.4.2. Radiographic contrast
 - 8.4.3. Film contrast
 - 8.4.4. Film latitude
 - 8.4.5. Subject contrast
 - 8.4.6. Definition
 - 8.4.7. Film graininess and screen mottle effects
 - 8.4.8. Penetrameter or image quality indicators
 - 8.4.9. Densitometer
- 8.5. Film handling, loading, and processing
 - 8.5.1. Darkroom practices
 - 8.5.2. Handling of film
 - 8.5.3. Prepackaged film
 - 8.5.4. Automatic processing
 - 8.5.5. Mixing of chemicals
- 8.6. Exposure techniques
 - 8.6.1. Single-wall radiography
 - 8.6.2. Double-wall radiography
 - 8.6.2.1. Superimposing one wall on the other
 - 8.6.2.2. Offset double-wall exposure single-wall viewing
 - 8.6.2.3. Offset double-wall exposure double-wall viewing (elliptical)
 - 8.6.3. Panoramic radiography
 - 8.6.4. Use of multiple-film loading
 - 8.6.5. Specimen configuration

9. Perform X-Ray Operations

- 9.1. Perform shielded operations
- 9.2. Perform unshielded operations
- 9.3. Perform operation per technical data

- 9.4. TO 33B-1-1
- 9.5. TO 33B-1-2
- 9.6. ASTM E 1742
- 9.7. AFOSH Standard 91-110

ATTACHMENT 14.70.A8 (Added)

NDI Classroom Training Course Outline

Radiographic Test Method - Level II

40 HOURS

1. Review Of Basic Radiographic Principles

- 1.1. Interaction of radiation with matter
- 1.2. Math review
- 1.3. Exposure calculations
- 1.4. Radiographic-image quality parameters

2. Darkroom Facilities, Techniques, And Processing

- 2.1. Facilities and equipment
 - 2.1.1. Automatic film processor vs. manual processing
 - 2.1.2. Safe lights
 - 2.1.3. Film cutting
- 2.2. Film Loading
 - 2.2.1. General rules for handling unprocessed film
 - 2.2.2. Types of film packaging
- 2.3. Protection of radiographic film in storage
- 2.4. Manual film processing
 - 2.4.1. Developer and replenishment
 - 2.4.2. Stop bath
 - 2.4.3. Fixer and replenishment
 - 2.4.4. Washing
 - 2.4.5. Drying
- 2.5. Automatic film processing
 - 2.5.1. Processing time/temperature
 - 2.5.2. Cleanliness
 - 2.5.3. Processing chemicals
- 2.6. Film filing and storage
 - 2.6.1. Retention life measurements
 - 2.6.2. Long term storage
 - 2.6.3. Filing and separation techniques
- 2.7. Unsatisfactory radiographs - causes and cures
 - 2.7.1. High film density
 - 2.7.2. Insufficient film density
 - 2.7.3. High contrast
 - 2.7.4. Low contrast
 - 2.7.5. Poor definition
 - 2.7.6. Fog
 - 2.7.7. Light leaks
 - 2.7.8. Artifacts
- 2.8. Film density
 - 2.8.1. Step-wedge comparison film
 - 2.8.2. Densitometers

2.8.3. Density requirements

3. Radiographic Viewing

- 3.1. Film-illuminator requirements
- 3.2. Background lighting
- 3.3. Multiple-composite viewing
- 3.4. Penetrameter/IQI placement
- 3.5. Personnel dark adaptation and visual acuity
- 3.6. Film identification
- 3.7. Location markers

4. Application Techniques

- 4.1. Multiple film techniques
 - 4.1.1. Thickness variation parameters
 - 4.1.2. Film speed
 - 4.1.3. Film latitude
- 4.2. Enlargement and projection
- 4.3. Geometrical relationships
 - 4.3.1. Geometrical unsharpness
 - 4.3.2. Penetrameter/IQI sensitivity
 - 4.3.3. Source to film distance
 - 4.3.4. Source to object distance
 - 4.3.5. Object to film distance
- 4.4. Triangulation methods for discontinuity location
- 4.5. Localized magnification
- 4.6. Film handling techniques

5. Evaluation of Castings

- 5.1. Casting discontinuities
- 5.2. Origin and typical orientation of discontinuities
- 5.3. Appearance on film
- 5.4. Casting codes/standards-applicable acceptance criteria
- 5.5. Reference radiographs

6. Evaluation Of Weldments

- 6.1. Welding-method review
- 6.2. Welding discontinuities
- 6.3. Origin of discontinuities
- 6.4. Orientation of discontinuities
- 6.5. Welding codes/standards
- 6.6. Reference radiographs or pictograms

7. Standards, Codes, And Procedures For Radiography

- 7.1 ASTM E 1742
- 7.2 TO 33B-1-1
- 7.3 TO 33B-1-2
- 7.4 AFOSH Standard 91-110

8. How To Write An X-Ray Procedure

- 8.1. AFTO Form 242

- 8.2. Aircraft or part end item (MDS)
- 8.3. Component to be examined
- 8.4. Areas to inspect
- 8.5. Material
 - 8.5.1. Alloy
 - 8.5.2. Thickness
- 8.6. Acceptance criteria/reference
- 8.7. Sketch
 - 8.7.1. Relative positions/distances of part, source, and film
 - 8.7.2. Penetrameter/IQI position
 - 8.7.3. Blocking and masking
- 8.8. Exposure settings
 - 8.8.1. Time
 - 8.8.2. Amperage
 - 8.8.3. Voltage
 - 8.8.4. Focal spot size (unnecessary with IQI)
- 8.9. Imaging
 - 8.9.1. Film
 - 8.9.2. Intensifying screens
 - 8.9.3. Filters
 - 8.9.4. Film density range
- 8.10. Penetrameter/IQI
 - 8.10.1. Type
 - 8.10.2. Size
 - 8.10.3. Image Quality
 - 8.10.4. Blocks
 - 8.10.5. Shims
- 8.11. Film identification
 - 8.11.1. Traceability to part
 - 8.11.2. Location marker to area of part
- 8.12. Specify marking and recording of defect

Attachment 14.73.A1 (Added)
AMARG WORK & SAFETY

14.73.A1.1. (Added) All personnel will wear appropriate Personal Protection Equipment (PPE):

14.73.A1.2. (Added) All personnel will be issued a safety whistle if required.

14.73.A1.3. (Added) Environment

14.73.A1.3.1. (Added) The potential exists for rodents, snakes, insects or other wildlife to be present during this operation.

14.73.A1.3.2. (Added) Use caution when lifting objects and conducting operations in the desert as some desert wildlife may be harmful.

14.73.A1.4. (Added) The potential exists for injuries to occur when working in the desert storage area.

14.73.A1.4.1. (Added) Use caution as uneven ground, holes or other unusual environmental conditions have the potential to cause injury.

14.73.A1.4.2. (Added) Place safety cones around work location.

14.73.A1.5. (Added) Lift Preparation:

14.73.A1.5.1. (Added) First, position the belly bands around the aircraft

14.73.A1.5.2. (Added) Use caution when approaching the aircraft. If the aircraft appears unstable do not approach it. Report the condition to the supervisor for his/her action.

14.73.A1.5.3. (Added) Do not place any body parts under the aircraft. Attach a rope to one end of the belly band and standing as far from the aircraft as possible, toss rope under belly and pull from opposite side of aircraft. Manually hook the belly band to the crane hook.

14.73.A1.5.4. (Added) Once the bands are in place, position the other mechanized equipment (i.e. forklifts) in the pre-determined locations around the aircraft.

14.73.A1.5.5. (Added) Be aware of the moving equipment and stay out of its path.

14.73.A1.5.6. (Added) Once the forklifts and cranes are in place, begin the lifting operation.

14.73.A1.5.7. (Added) Use caution around the heavy equipment so as not to get in its path. Be aware that the equipment may move in reverse.

14.73.A1.6. (Added) During the lift: One person will be responsible for giving instructions; however, he/she may appoint additional communicators as required to accommodate obstacles in the work area. (i.e. When instructions are required from both sides of the aircraft).

14.73.A1.6.1. (Added) If at any point during the operation an unsafe condition such as a slipping belly band, the aircraft beginning to roll, an unstable piece of heavy equipment or any other questionable condition is identified blow your whistle or shout "KNOCK IT OFF".

14.73.A1.6.2. (Added) Move as quickly as possible out of the way of the unsafe condition.

14.73.A1.6.3. (Added) At that time the appointed task supervisor will determine a course of action. If a safe determination cannot be made stop all operations and call for safety, QA and available resident engineer for assistance.

14.73.A1.7. (Added) Module placement:

14.73.A1.7.1. (Added) When the lift is successful, assigned personnel will remove condemned modules and replace with serviceable ones in the pre-determined order and with heavy equipment.

14.73.A1.7.2. (Added) Old modules will not be pushed or pulled into position with new modules.

14.73.A1.7.3. (Added) Safety observers are always responsible for monitoring for unsafe conditions and will provide assistance.

14.73.A1.8. (Added) Post positioning:

14.73.A1.8.1. (Added) Once the old modules are removed and the new ones are in place, use caution as the aircraft will be lowered. If the load appears to be unstable, re-engage with lifting the aircraft and repositioning aircraft. Once the load is stabilized, use caution as heavy equipment will be moving out of position.

14.73.A1.8.2. (Added) To remove belly bands use caution and ensure that no part of the body is under the aircraft. Disconnect one end of the belly band from the crane hook, and pull out from opposite side of aircraft.

Emergency phone numbers are:

Job Control 228-8777

Fire Department 911

Attachment 17 (Added-AFMC)

INSTRUCTIONS FOR AFMC Form 959 (FOR ALCS ONLY)

(Added) The 309 AMARG uses a computer generated WCD in the same format

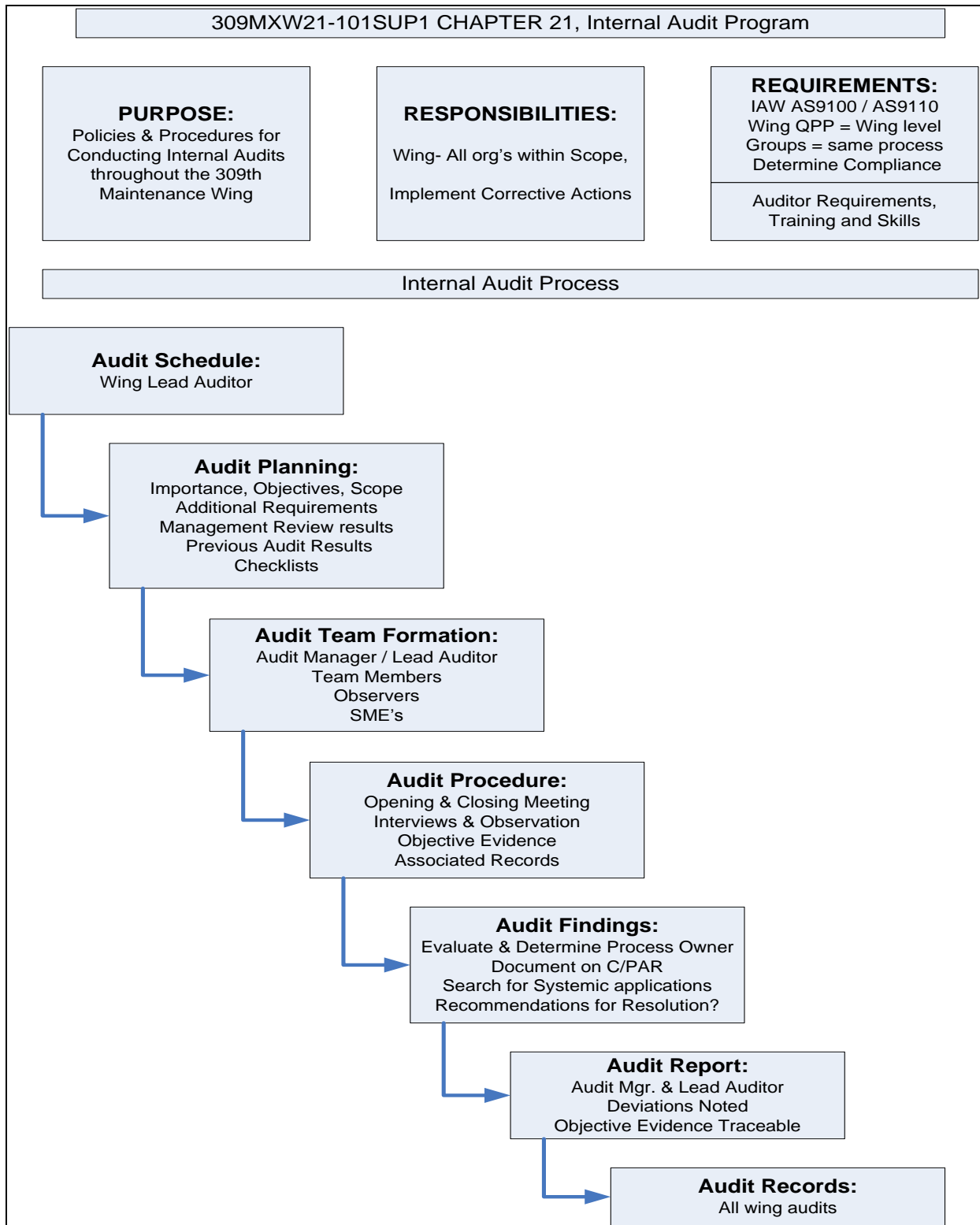
AFMC (Added) Attachment 20

(Added) This code (E) is used when verification of technical data conformance requires a “second set of eyes” during task accomplishment or prior to the completion of the task.

AFMC (Added) Table A20.1.

(Added) X-coded tasks will be stamped and dated to denote task accomplishment.

Attachment A21.1. (Added)



Attachment 24 (Added)

Cross Group 343 Checklist (Added) (Effective 18 March 09)

A24.1. (Added) Block 1– Enter the assessment type

A24.2. (Added) Block 2 - Enter the date the assessment was performed, if not current date.

A24.3. (Added) Block 5– If this is a Routine Inspection, select the applicable Category. If it is an MI or SI, select the applicable category or other.

A24.4. (Added) Block 6– If this is an RI, MI or SI select the applicable checklist.

A24.5. (Added) Block 8– Enter the Assessment Rating of the 343.

A24.6. (Added) Block 10 - Select the name of the supervisor of the area WHERE THE DISCREPANCY WAS FOUND. This is to help the receiving organization find the people/area to talk to about the finding.

A24.7. (Added) Block 9 - Select the QA organization (*your organization*) that is initiating the 343. (i.e.: AQPX , SPQX, MQPX, EQPX, CQPX, CLSS, LGXQ).

A24.8. (Added) Block 11– Select a Defect Class for the finding.

A24.9. (Added) Blocks 12a thru 12v (**Added**) - Fill in the information in these blocks as required by your group.

A24.10. (Added) Block 12w For Tool Contract 343s (**Added**) – Type in the organization where the discrepancy occurred.

A24.11. (Added) Block 13– Enter the evaluator’s name or Q stamp number as required by each group.

A24.12. (Added) Block 15 - Enter the finding discrepancy and any other pertinent information relevant to the discrepancy. Include as much information concerning the discrepancy as possible. (i.e. building and room number, machine PM/FEMS number, TO account and book number, tool box number, office symbol of individual who will need to correct the discrepancy).

A24.13. (Added) Block 16 – Enter the TO or Instructional reference number for the finding and the name and duty phone of the QAS who performed the assessment. (This will enable the recipient to contact the initiator and ask any questions they may have.)

A24.14. (Added) Block 17 – For all write-ups that involve an 309 MXW contract (TODO, AGE, Fastenal, etc.) enter the name Jack Deschner (309 MXW/QP). This change is per Kris Pastrana’s email dated 18 March 2009. For write-ups against another group that does not involve a 309 MXW contract, such as a DSV, enter the name of the QIMSS administrator for that group. Please notify the respective WCA thru email.

A24.15. (Added) After the form has been entered and saved, notify the receiving QA organization that the 343 is in QIMSS waiting for their corrective action, and provide them the control number (block 4). This can be done either through e-mail, telephone or the base distribution system.

Attachment 25 (Added) How to close a cross group 343 in QIMSS

A25.1.1. (Added) Blocks 20, 21, 23 and 24 - The receiving organization will enter their corrective action and planned action to prevent recurrence in blocks 19, 20, 21, 23 and 24. The name or stamp number of the person who performs the corrective and planned action to prevent recurrence will be entered in blocks 21 and 21a respectively. If there is an action plan waiting to be implemented, enter the implementation date in 25.

A25.1.2. (Added) Save the completed Form 343 by either clicking on the “Save” icon, holding down the “Control” key and typing an “S” or by selecting the “Save” function from the drop down “File” menu.

A25.1.3. (Added) After the information has been entered and saved, notify the evaluator who initiated the 343 by e-mail that it is ready for review and follow-up action if necessary.

A25.1.4. (Added) Block 26 The initiating evaluator will review the corrective and preventative actions. If the actions taken are satisfactory, the evaluator will accept them by selecting “Accept” in block 26.

A25.1.5. (Added) Save the accepted actions by either clicking on the “Save” icon, holding down the “Control” key and typing an “S” or by selecting the “Save” function from the drop down “File” menu.

A25.1.6. (Added) Blocks 28, 29, 29a and 30 - According to their group policy, the evaluator will then complete the follow-up section blocks if necessary.

A25.1.7. (Added) Save the follow-up actions by either clicking on the “Save” icon, holding down the “Control” key and typing an “S” or by selecting the “Save” function from the drop down “File” menu.

A25.1.8. (Added) The evaluator will then close and save the form by selecting “close” option in the form status section and then clicking on the “Save” icon.

A25.1.9. (Added) Block 26 & 26a - If the initiating evaluator is unsatisfied with the corrective or preventative actions, they will select “Reject” in block 26, and enter the date in 26a. They will then enter their reject justification in block 27 and save the form.

A25.1.10. (Added) The evaluator will then contact the receiving organization to notify them that the action was rejected. The evaluator may assist the receiving organization in the development of a new corrective action and action plan if needed.

A25.1.11. (Added) The receiving organization will then enter a second or new corrective and preventative action (number 2 of 2) and resubmit it for approval IAW step one of these instructions.